L5 ANSWER 25 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:759916 CAPLUS
DN 134:36796
TI .gamma.-Tocopherol and its major metabolite, in contrast to .alpha.-tocopherol, inhibit cyclooxygenase activity in macrophages and epithelial cells
AU Jiang, Qing; Elson-Schwab, Ilan; Courtemanche, Chantal; Ames, Bruce N.
CS Division of Biochemistry and Molecular Biology, University of California, Berkeley, CA, 94720, USA
SO Proceedings of the National Academy of Sciences of the United States of America (2000), 97(21), 11494-11499
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
CC 1-7 (Pharmacology)
AB Cyclooxygenease-2 (COX-2)-catalyzed synthesis of prostaglandin E2 (PGE2) plays a key role in inflammation and its assocd. diseases, such as cancer and vascular heart disease. Here we report that .gamma.-tocopherol (.gamma.T) reduced PGE2 synthesis in both lipopolysaccharide (LPS)-stimulated RAW264.7 macrophages and IL-1.beta.-treated A549 human epithelial cells with an apparent IC50 of 7.5 and 4 ,mu.M, resp. The major metabolite of dietary .gamma.T, 2,7,8-trimethyl-2-(.beta.-carboxyethyl)-6-hydroxychroman (.gamma.-**CEHC**), also exhibited an inhibitory effect, with an IC50 of .apprxeq.30 .mu.M in these cells. In contrast, .alpha.-tocopherol at 50 .mu.M slightly reduced (25%) PGE2 formation in macrophages, but had no effect in epithelial cells. The inhibitory effects of .gamma.T and .gamma.-**CEHC** stemmed from their inhibition of COX-2 activity, rather than affecting protein expression or substrate availability, and appeared to be independent of antioxidant activity. .gamma.-**CEHC** also inhibited PGE2 synthesis when exposed for 1 h to COX-2-preinduced cells followed by the addn. of arachidonic acid (AA), whereas under similar conditions, .gamma.T required an 8- to 24-h incubation period to cause the inhibition. The inhibitory potency of .gamma.T and .gamma.-**CEHC** was diminished by an increase in AA concn., suggesting that they might compete with AA at the active site of COX-2. We also obsd. a moderate redn. of nitrite accumulation and suppression of inducible nitric oxide synthase expression by .gamma.T in lipopolysaccharide-treated macrophages. These findings indicate that .gamma.T and its major metabolite possess anti-inflammatory activity and that .gamma.T at physiol. concns. may be important in human disease prevention.
ST gamma tocopherol cyclooxygenase 2 antiinflammatory
IT Antioxidants
(pharmaceutical; .gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 39391-18-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cyclooxygenase-2; .gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 59-02-9, .alpha.-Tocopherol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 178167-88-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MFM (Metabolic formation); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)

IT 7616-22-0, .gamma.-Tocopherol
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(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 363-24-6, PGE2 41598-07-6, PGD2 125978-95-2, Nitric oxide synthase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 155976-51-5, 8-Isoprostane
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
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AN 2000:788255 CAPLUS
DN 134:55952
TI Production of LLU-.alpha. following an oral administration of .gamma.-tocotrienol or .gamma.-tocopherol to rats
AU Hattori, Akihiro; Fukushima, Takeshi; Yoshimura, Hiroyuki; Abe, Kouichi; Imai, Kazuhiro
CS Department of Bio-Analytical Chemistry, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, 113-0033, Japan
SO Biological & Pharmaceutical Bulletin (2000), 23(11), 1395-1397
CODEN: BPBLEO; ISSN: 0918-6158
PB Pharmaceutical Society of Japan
DT Journal
LA English
CC 18-2 (Animal Nutrition)
Section cross-reference(s): 13
AB An oral administration of .gamma.-tocotrienol (.gamma.-T3) or .gamma.-tocopherol (.gamma.-Toc) to male rats caused an increase of the concn. of 2,7,8-trimethyl-2-(.beta.-carboxyethyl)-6-hydroxy chroman (LLU-.alpha., .gamma.-**CEHC**), a natriuretic compd., in plasma with a Tmax of 9 h. The configuration at C-2 of LLU-.alpha. produced from .gamma.-T3 or .gamma.-Toc was assigned as S-form by an HPLC equipped with a chiral column. These data indicated that LLU-.alpha. was produced not only from .gamma.-Toc but also .gamma.-T3, without racemization at C-2 in rats.
ST LLU tocotrienol tocopherol metab; chroman deriv formation tocotrienol tocopherol; hydroxychroman deriv formation tocotrienol tocopherol
IT 7616-22-0, .gamma.-Tocopherol 14101-61-2, .gamma.-Tocotrienol
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(LLU-.alpha. prodn. following an oral administration of .gamma.-tocotrienol or .gamma.-tocopherol to rats)
IT 178167-88-9
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
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IT 7616-22-0, .gamma.-Tocopherol

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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
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RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
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AN 1999:504149 CAPLUS
DN 131:252216
TI Chemopreventive activity of celecoxib, a specific cyclooxygenase-2 inhibitor, and indomethacin against ultraviolet light-induced **skin** carcinogenesis
AU Fischer, Susan M.; Lo, Herng-Hsang; Gordon, Gary B.; Seibert, Karen; Kelloff, Gary; Lubet, Ronald A.; Conti, Claudio J.
CS Science Park-Research Division, The University of Texas M. D. Anderson Cancer Center, Smithville, TX, 78957, USA
SO Molecular Carcinogenesis (1999), 25(4), 231-240
CODEN: MOCAE8; ISSN: 0899-1987
PB Wiley-Liss, Inc.
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 8
AB Epidemiol. and dietary studies suggest that nonsteroidal anti-inflammatory drugs (NSAIDs) reduce the risk of colon cancer, possibly through a mechanism involving inhibition of cyclooxygenase (**COX**)-**2**, which is overexpressed in premalignant adenomatous polyps and colon cancer. Because UV light (UV) can induce **COX-2** and nonspecific NSAIDs can decrease UV-induced **skin** cancer, we evaluated the ability of two compds., celecoxib (a specific **COX-2** inhibitor) and indomethacin (a nonspecific NSAID), to block UV-induced **skin** tumor development in SKH:HR-1-hrBr hairless mice. Mice fed 150 or 500 ppm celecoxib showed a dose-dependent redn. (60% and 89%, resp.) in tumor yield. Indomethacin (4 ppm) reduced tumor yield by 78%. Although both acute and chronic UV exposure increased cell proliferation and edema, neither compd. reduced these parameters. In contrast, UV-induced prostaglandin synthesis in the epidermis was effectively blocked by both compds. UV-induced increases in **COX-2** expression in **skin** were also not altered in any of the treatment groups. Similarly, tumors that constitutively express high levels of **COX-2** displayed no redn. by treatment with celecoxib or indomethacin. The dramatic protective effects of celecoxib suggests that specific **COX-2** inhibitors may offer a way to safely reduce the risk of **skin** cancer in humans.
ST COX2 celecoxib NSAID indomethacin UV **skin** carcinogenesis
IT Radioprotectants
Transformation, neoplastic
UV radiation
(**COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)
IT Prostaglandins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis: epidermal prostaglandin synthesis inhibition)
IT **Skin**
(epidermis; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis: epidermal prostaglandin synthesis inhibition)
IT **Skin**, neoplasm
Skin, neoplasm
(inhibitors; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)
IT Anti-inflammatory agents
(nonsteroidal; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)

IT Antitumor agents
Antitumor agents
(**skin**; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)
IT 39391-18-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(2; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)
IT 53-86-1, Indomethacin 169590-42-5, Celecoxib
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)
IT 363-24-6, Pge2
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis: epidermal prostaglandin synthesis inhibition)
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L21 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 2001:870069 CAPLUS
DN 136:130852
TI Rays and arrays: the transcriptional program in the response of human epidermal keratinocytes to UVB illumination
AU Li, Deling; Turit, Thomas G.; Schuck, Alyssa; Freedberg, Irwin M.; Khitrov, Gregory; Blumenberg, Miroslav
CS The R. O. Perelman Department of Dermatology, New York University School of Medicine, New York, NY, USA
SO FASEB Journal (2001), 15(13), 2533-2535, 10.1096/fj.01-0172fje
CODEN: FAJOEC; ISSN: 0892-6638
PB Federation of American Societies for Experimental Biology
DT Journal
LA English
CC 8-7 (Radiation Biochemistry)
AB The epidermis, our first line of defense from UV light, bears the majority of photodamage, which results in skin thinning, **wrinkling**, keratosis, and malignancy. Hypothesizing that skin has specific mechanisms to protect itself and the organism from UV damage, we used DNA arrays to follow UV-caused gene expression changes in epidermal keratinocytes. Of the 6,800 genes examd., UV regulates the expression of at least 198. Three waves of changes in gene expression can be distinguished, 0.5-2, 4-8, and 16-24 h after illumination. The first contains transcription factors, signal transducing, and cytoskeletal proteins that change cell phenotype from a normal, fast-growing cell to an activated, paused cell. The second contains secreted growth factors, cytokines, and chemokines; keratinocytes, having changed their own physiol., alert the surrounding tissues to the UV damage. The third wave contains components of the cornified envelope, as keratinocytes enhance the epidermal protective covering and, simultaneously, terminally differentiate and die, removing a carcinogenic threat. UV also induces the expression of mitochondrial proteins that provide addnl. energy, and the enzymes that synthesize raw materials for DNA repair. Using a novel skin organ culture model, we demonstrated that the UV-induced changes detected in keratinocyte cultures also occur in human epidermis in vivo.
ST UVB radiation regulated gene skin keratinocyte
IT Macrophage inflammatory protein 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(MIP-2.alpha.; transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
IT Cell membrane
Cytoskeleton
DNA repair
Post-transcriptional processing
Signal transduction, biological
(UVB-regulated genes in human epidermal keratinocytes)
IT Chemokines
Cytokines
Elastins
Gene, animal
Growth factors, animal
Interleukin 8
Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(UVB-regulated genes in human epidermal keratinocytes)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-myc; transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
IT Cell envelope
(cornified; UVB-regulated genes in human epidermal keratinocytes)
IT Antioxidants

(defense proteins; UVB-regulated genes in human epidermal keratinocytes)
IT Cell junction
(desmosome; UVB-regulated genes in human epidermal keratinocytes)
IT Metabolism
(energy; UVB-regulated genes in human epidermal keratinocytes)
IT Skin
(epidermis; transcriptional program in response of human epidermal keratinocytes to UVB illumination)
IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes regulated by; UVB-regulated genes in human epidermal keratinocytes)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(involucrins; transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
IT Skin
(keratinocyte; transcriptional program in response of human epidermal keratinocytes to UVB illumination)
IT Chemokines
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(melanoma growth-stimulating activity-.beta.; transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
IT Skin, disease
(photoaging; transcriptional program in response of human epidermal keratinocytes to UVB illumination)
IT Post-translational processing
(proteolytic; UVB-regulated genes in human epidermal keratinocytes)
IT DNA microarray technology
Human
UV B radiation
(transcriptional program in response of human epidermal keratinocytes to UVB illumination)
IT mRNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
IT Caseins, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.beta.-; UVB-regulated genes in human epidermal keratinocytes)
IT 329900-75-6, **Cyclooxygenase** 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
RE.CNT 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD
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AN 2001:800060 CAPLUS
DN 136:66317
TI UV erythema reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined in comparison to indomethacin
AU Grundmann, Jens-Uwe; Bockelmann, Raik; Bonnekoh, Bernd; Gollnick, Harald P. M.
CS Department of Dermatology and Venereology, Otto-von-Guericke-University, Magdeburg, D-39120, Germany
SO Photochemistry and Photobiology (2001), 74(4), 587-592
CODEN: PHCBAP; ISSN: 0031-8655
PB American Society for Photobiology
DT Journal
LA English
CC 8-9 (Radiation Biochemistry)
Section cross-reference(s): 1
AB UV light exerts hazardous effects such as induction of skin cancer and premature **skin aging**. In this study we evaluated an assumptive anti-inflammatory effect of the nonsedative histamine H1-receptor antagonist, mizolastine, on UV-induced acute sunburn reaction. Therefore, a clin., randomized, double-blind, four-arm, crossover study was conducted in healthy young female volunteers (skin type II) comparing the UV sensitivity under mizolastine, acetyl-salicylic acid (ASA), indomethacin or a mizolastine/ASA combination. Moreover, HaCaT keratinocytes were incubated with mizolastine under various UV treatment modalities in vitro to study its effect on the release of inflammatory cytokines, i.e. interleukin (IL)-1.alpha., IL-6 and tumor necrosis factor .alpha. (TNF-.alpha.). All three drugs were effective in suppressing the UVB-, UVA- and combined UVA/UVB-erythema. However, the strongest effects were obsd. using the combined treatment with both 250 mg ASA and 10 mg mizolastine. An inhibitory effect in vitro of 10 nM mizolastine upon UV-induced cytokine release from HaCaT keratinocytes was obsd. for IL-1.alpha. at 24 h after 10 J/cm2 UVA1, for IL-6 at 48 h after 10 J/cm2 UVA1 and 30 mJ/cm2 UVB, and also for TNF-.alpha. at 4 h after 10 J/cm2 UVA, 10 J/cm2 UVA1 and 30 mJ/cm2 UVB, resp. The combination of mizolastine and ASA can be strongly recommended as a protective measure against UV erythema development with a lower unwanted side effect profile than that of the hitherto treatment modality, i.e. indomethacin.
ST UV erythema protection antiinflammatory mizolastine acetylsalicylic acid cytokine
IT Anti-inflammatory agents
Drug interactions
Erythema
Human
Radioprotectants
Sunburn
UV A radiation
UV radiation
(UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT Interleukin 1.alpha.
Interleukin 6
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT Skin, disease
(aging, prevention; UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT Cytokines
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inflammatory; UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)

IT Skin
(keratinocyte; UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT 50-78-2, Acetyl-salicylic acid 108612-45-9, Mizolastine
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT 39391-18-9, **Cyclooxygenase**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
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NEWS 14	Nov 25	More calculated properties added to REGISTRY
NEWS 15	Dec 04	CSA files on STN
NEWS 16	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 17	Dec 17	TOXCENTER enhanced with additional content
NEWS 18	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 19	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS 20	Feb 13	CANCERLIT is no longer being updated
NEWS 21	Feb 24	METADEX enhancements
NEWS 22	Feb 24	PCTGEN now available on STN
NEWS 23	Feb 24	TEMA now available on STN
NEWS 24	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS 25	Feb 26	PCTFULL now contains images
NEWS 26	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 27	Mar 20	EVENTLINE will be removed from STN
NEWS 28	Mar 24	PATDPAFULL now available on STN
NEWS 29	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS 30	Apr 11	Display formats in DGENE enhanced
NEWS 31	Apr 14	MEDLINE Reload
NEWS 32	Apr 17	Polymer searching in REGISTRY enhanced
NEWS 33	Jun 13	Indexing from 1947 to 1956 added to records in CA/CAPLUS
NEWS 34	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS 35	Apr 28	RDISCLOSURE now available on STN
NEWS 36	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS 37	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS 38	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 39	May 16	CHEMREACT will be removed from STN
NEWS 40	May 19	Simultaneous left and right truncation added to WSCA
NEWS 41	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation
NEWS 42	Jun 06	Simultaneous left and right truncation added to CBNB
NEWS 43	Jun 06	PASCAL enhanced with additional data

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NEWS 44  Jun 20  2003 edition of the FSTA Thesaurus is now available
NEWS 45  Jun 25  HSDB has been reloaded

NEWS EXPRESS  April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
              MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
              AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
NEWS HOURS    STN Operating Hours Plus Help Desk Availability
NEWS INTER    General Internet Information
NEWS LOGIN    Welcome Banner and News Items
NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

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FILE 'HOME' ENTERED AT 16:16:23 ON 25 JUN 2003

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'REGISTRY' ENTERED AT 16:16:34 ON 25 JUN 2003
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STRUCTURE FILE UPDATES:   24 JUN 2003  HIGHEST RN 536971-45-6
DICTIONARY FILE UPDATES:  24 JUN 2003  HIGHEST RN 536971-45-6

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s chec
L1          15 CHEC

=> d l1 15

L1   ANSWER 15 OF 15  REGISTRY  COPYRIGHT 2003 ACS
RN   156288-21-0  REGISTRY
CN   Protein (Bacillus subtilis 209-amino acid) (9CI)  (CA INDEX NAME)
OTHER NAMES:
```

CN **Protein (Bacillus subtilis gene cheC)**
CN Protein orfA (Bacillus subtilis fla/che region)
FS PROTEIN SEQUENCE
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS

RELATED SEQUENCES AVAILABLE WITH SEQLINK

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
2 REFERENCES IN FILE CA (1957 TO DATE)
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> s l1 1
MISSING OPERATOR

=> d l1 1

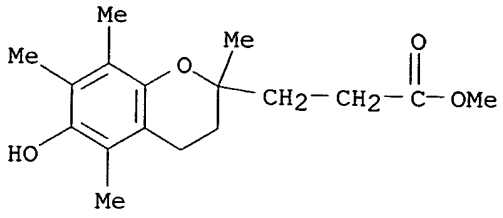
L1 ANSWER 1 OF 15 REGISTRY COPYRIGHT 2003 ACS
RN 500491-62-3 REGISTRY
CN **Chemotaxis protein cheC (Clostridium tetani strain E88 gene cheC) (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN GenBank AAO36263
CN GenBank AAO36263 (Translated from: GenBank AE015942)
FS PROTEIN SEQUENCE
MF Unspecified
CI MAN
SR GenBank
LC STN Files: CA, CAPLUS, TOXCENTER

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
*** USE 'SQD' OR 'SQIDE' FORMATS TO DISPLAY SEQUENCE ***
1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> s cehc
L2 5 CEHC

=> d l2 5

L2 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2003 ACS
RN 98760-50-0 REGISTRY
CN 2H-1-Benzopyran-2-propanoic acid, 3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-, methyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Chromanpropionic acid, 6-hydroxy-2,5,7,8-tetramethyl-, methyl ester (6CI)
OTHER NAMES:
CN **.alpha.-CEHC methyl ester**
FS 3D CONCORD
MF C17 H24 O4
SR CA
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1957 TO DATE)
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	14.68	14.89

FILE 'CAPLUS' ENTERED AT 16:18:12 ON 25 JUN 2003
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FILE COVERS 1907 - 25 Jun 2003 VOL 138 ISS 26
FILE LAST UPDATED: 24 Jun 2003 (20030624/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l2
L3 2 L2

=> d his

(FILE 'HOME' ENTERED AT 16:16:23 ON 25 JUN 2003)

FILE 'REGISTRY' ENTERED AT 16:16:34 ON 25 JUN 2003
L1 15 S CHEC
L2 5 S CEHC

FILE 'CAPLUS' ENTERED AT 16:18:12 ON 25 JUN 2003
L3 2 S L2

=> s l2
L4 2 L2

=> d l4 1-2

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2002:668559 CAPLUS
DN 138:3996
TI Synthesis and analysis of conjugates of the major vitamin E metabolite, .alpha.-CEHC
AU Pope, Simon A. S.; Burtin, Guillaume E.; Clayton, Peter T.; Madge, David J.; Muller, David P. R.
CS The Institute of Child Health, Biochemistry, Endocrinology and Metabolism Unit, University College London, London, UK
SO Free Radical Biology & Medicine (2002), 33(6), 807-817
CODEN: FRBMEH; ISSN: 0891-5849
PB Elsevier Science Inc.
DT Journal
LA English
OS CASREACT 138:3996
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 1985:615586 CAPLUS
DN 103:215586
TI Autoxidation of biological molecules. 4. Maximizing the antioxidant activity of phenols
AU Burton, G. W.; Doba, T.; Gabe, E.; Hughes, L.; Lee, F. L.; Prasad, L.; Ingold, Keith U.
CS Div. Chem., Natl. Res. Counc. Canada, Ottawa, ON, K1A 0R6, Can.
SO Journal of the American Chemical Society (1985), 107(24), 7053-65
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
OS CASREACT 103:215586

=> s cehc
L5 41 CEHC

=> d l5 20-41

L5 ANSWER 20 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2001:465748 CAPLUS
DN 135:194909
TI .alpha.-tocopherol affects the urinary and biliary excretion of 2,7,8-trimethyl-2(2'-carboxyethyl)-6-hydroxychroman, .gamma.-tocopherol metabolite, in rats
AU Kiyose, Chikako; Saito, Hisako; Kaneko, Kazuyo; Hamamura, Kimio; Tomioka, Mitsugu; Ueda, Tadahiko; Igarashi, Osamu
CS Institute of Environmental Science for Human Life, Ochanomizu University, Tokyo, 112-8610, Japan
SO Lipids (2001), 36(5), 467-472
CODEN: LPDSAP; ISSN: 0024-4201
PB AOCS Press
DT Journal
LA English
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 21 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2001:251669 CAPLUS
DN 134:290494

TI A fluorimetric, column-switching HPLC and its application to an elimination study of LLU-.alpha. enantiomers in rat plasma
AU Hattori, Akihiro; Fukushima, Takeshi; Hamamura, Kimio; Kato, Masaru; Imai, Kazuhiro
CS Department of Bio-Analytical Chemistry, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, 113-0033, Japan
SO Biomedical Chromatography (2001), 15(2), 95-99
CODEN: BICHE2; ISSN: 0269-3879
PB John Wiley & Sons Ltd.
DT Journal
LA English
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2001:120242 CAPLUS
DN 134:236753
TI .alpha.- and .gamma.-tocotrienols are metabolized to carboxyethyl-hydroxychroman derivatives and excreted in human urine
AU Lodge, John K.; Ridlington, James; Leonard, Scott; Vaule, Heather; Traber, Maret G.
CS Linus Pauling Institute, Oregon State University, Corvallis, OR, 97331-6512, USA
SO Lipids (2001), 36(1), 43-48
CODEN: LPDSAP; ISSN: 0024-4201
PB AOCS Press
DT Journal
LA English
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 23 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:895441 CAPLUS
DN 134:192659
TI Bioavailability and potency of natural-source and all-racemic .alpha.-tocopherol in the human: A dispute
AU Hoppe, P. P.; Krennrich, G.
CS Nutrition Research Station, BASF Aktiengesellschaft, Offenbach, 76877, Germany
SO European Journal of Nutrition (2000), 39(5), 183-193
CODEN: EJNUFZ; ISSN: 1436-6207
PB Steinkopff Verlag
DT Journal
LA English
RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 24 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:788255 CAPLUS
DN 134:55952
TI Production of LLU-.alpha. following an oral administration of .gamma.-tocotrienol or .gamma.-tocopherol to rats
AU Hattori, Akihiro; Fukushima, Takeshi; Yoshimura, Hiroyuki; Abe, Kouichi; Imai, Kazuhiro
CS Department of Bio-Analytical Chemistry, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, 113-0033, Japan
SO Biological & Pharmaceutical Bulletin (2000), 23(11), 1395-1397
CODEN: BPBLEO; ISSN: 0918-6158
PB Pharmaceutical Society of Japan
DT Journal
LA English
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 25 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:759916 CAPLUS
DN 134:36796
TI .gamma.-Tocopherol and its major metabolite, in contrast to .alpha.-tocopherol, inhibit cyclooxygenase activity in macrophages and epithelial cells
AU Jiang, Qing; Elson-Schwab, Ilan; Courtemanche, Chantal; Ames, Bruce N.
CS Division of Biochemistry and Molecular Biology, University of California, Berkeley, CA, 94720, USA
SO Proceedings of the National Academy of Sciences of the United States of America (2000), 97(21), 11494-11499
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 26 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:728570 CAPLUS
DN 134:16205
TI Urinary .alpha.-tocopherol metabolites in .alpha.-tocopherol transfer protein-deficient patients
AU Schuelke, Markus; Elsner, Angelika; Finckh, Barbara; Kohlschutter, Alfried; Hubner, Christoph; Brigelius-Flohe, Regina
CS Department of Neuropediatrics, Charite University Hospital, Humboldt University Berlin, Berlin, D-13353, Germany
SO Journal of Lipid Research (2000), 41(10), 1543-1551
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 27 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:605350 CAPLUS
DN 134:2274
TI A New Method for the Analysis of Urinary Vitamin E Metabolites and the Tentative Identification of a Novel Group of Compounds
AU Pope, S. A. S.; Clayton, P. T.; Muller, D. P. R.
CS Biochemistry, Endocrinology and Metabolism Unit, Institute of Child Health, University College London, London, UK
SO Archives of Biochemistry and Biophysics (2000), 381(1), 8-15
CODEN: ABBIA4; ISSN: 0003-9861
PB Academic Press
DT Journal
LA English
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 28 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:456026 CAPLUS
DN 133:149828
TI Overview of studies on vitamin E metabolism - Missing link of vitamin E metabolism
AU Nakamura, Tetsuya
CS Department of Chemistry, Shibaura Institute of Technology, Fukasaku, Ohmiya, 330-8570, Japan
SO Bitamin (2000), 74(5-6), 255-261

CODEN: BTMNA7; ISSN: 0006-386X
PB Nippon Bitamin Gakkai
DT Journal; General Review
LA Japanese

L5 ANSWER 29 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:420456 CAPLUS
DN 133:99955
TI Occurrence and determination of a natriuretic hormone, 2,7,8-trimethyl-2-(.beta.-carboxyethyl)-6-hydroxy chroman, in rat plasma, urine, and bile
AU Hattori, Akihiro; Fukushima, Takeshi; Imai, Kazuhiro
CS Department of Bio-Analytical Chemistry, Graduate School of Pharmaceutical Sciences, University of Tokyo, Tokyo, 113-0033, Japan
SO Analytical Biochemistry (2000), 281(2), 209-215
CODEN: ANBCA2; ISSN: 0003-2697
PB Academic Press
DT Journal
LA English
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 30 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:337048 CAPLUS
DN 133:104332
TI Studies of the metabolism of .alpha.-tocopherol stereoisomers in rats using [5-methyl-14C]SRR- and RRR-.alpha.-tocopherol
AU Kaneko, Kazuyo; Kiyose, Chikako; Ueda, Tadahiko; Ichikawa, Hisatsugu; Igarashi, Osamu
CS Institute of Environmental Science for Human Life, Ochanomizu University, Tokyo, 112-8610, Japan
SO Journal of Lipid Research (2000), 41(3), 357-367
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 31 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:156210 CAPLUS
DN 132:347067
TI A novel 5'-carboxychroman metabolite of .gamma.-tocopherol secreted by HepG2 cells and excreted in human urine
AU Parker, Robert S.; Swanson, Joy E.
CS Division of Nutritional Sciences, Cornell University, Ithaca, NY, 14853, USA
SO Biochemical and Biophysical Research Communications (2000), 269(2), 580-583
CODEN: BBRCA9; ISSN: 0006-291X
PB Academic Press
DT Journal
LA English
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 32 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:51722 CAPLUS
DN 132:248204
TI A rapid method for the extraction and determination of vitamin E metabolites in human urine
AU Lodge, John K.; Traber, Maret G.; Elsner, Angelika; Brigelius-Flohe,

Regina
CS Linus Pauling Institute, Oregon State University, Corvallis, OR, 97330, USA
SO Journal of Lipid Research (2000), 41(1), 148-154
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 33 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1999:711893 CAPLUS
DN 132:75508
TI Quantification of the .alpha.- and .gamma.-Tocopherol Metabolites 2,5,7,8-Tetramethyl-2-(2'-carboxyethyl)-6-hydroxychroman and 2,7,8-Trimethyl-2-(2'-carboxyethyl)-6-hydroxychroman in Human Serum
AU Stahl, W.; Graf, P.; Brigelius-Flohe, R.; Wechter, W.; Sies, H.
CS Institut fur Physiologische Chemie I, Heinrich-Heine-Universitat Dusseldorf, Germany
SO Analytical Biochemistry (1999), 275(2), 254-259
CODEN: ANBCA2; ISSN: 0003-2697
PB Academic Press
DT Journal
LA English
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 34 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1999:464704 CAPLUS
DN 131:223815
TI Nitric oxide can function as either a killer molecule or an antiapoptotic effector in cardiomyocytes
AU Stefanelli, Claudio; Pignatti, Carla; Tantini, Benedetta; Stanic, Ivana; Bonavita, Francesca; Muscari, Claudio; Guarnieri, Carlo; Clo, Carlo; Caldarera, Claudio M.
CS Department of Biochemistry 'G. Moruzzi', University of Bologna, Bologna, 40126, Italy
SO Biochimica et Biophysica Acta (1999), 1450(3), 406-413
CODEN: BBACAQ; ISSN: 0006-3002
PB Elsevier Science B.V.
DT Journal
LA English
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 35 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1999:437875 CAPLUS
DN 131:198876
TI Vitamin E: function and metabolism
AU Brigelius-Flohe, Regina; Traber, Maret G.
CS German Institute of Human Nutrition, Bergholz-Rehbrucke, D-14558, Germany
SO FASEB Journal (1999), 13(10), 1145-1155
CODEN: FAJOEC; ISSN: 0892-6638
PB Federation of American Societies for Experimental Biology
DT Journal; General Review
LA English
RE.CNT 112 THERE ARE 112 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 36 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1999:235185 CAPLUS

DN 131:31364
TI Urinary excretion of 2,7,8-trimethyl-2-(.beta.-carboxyethyl)-6-hydroxychroman is a major route of elimination of .gamma.-tocopherol in humans
AU Swanson, J. E.; Ben, R. N.; Burton, G. W.; Parker, R. S.
CS Division of Nutritional Sciences, Cornell University, Ithaca, NY, 14853, USA
SO Journal of Lipid Research (1999), 40(4), 665-671
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 37 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1998:677442 CAPLUS
DN 130:50169
TI Synthetic as compared with natural vitamin E is preferentially excreted as .alpha.-**CEHC** in human urine: studies using deuterated .alpha.-tocopheryl acetates
AU Traber, Maret G.; Elsner, Angelika; Brigelius-Flohe, Regina
CS Linus Pauling Institute, Oregon State University, Corvallis, OR, 97330, USA
SO FEBS Letters (1998), 437(1,2), 145-148
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier Science B.V.
DT Journal
LA English
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 38 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1997:712440 CAPLUS
DN 128:11596
TI .alpha.-Carboxyethyl-6-hydroxychroman as urinary metabolite of vitamin E
AU Schultz, Manfred; Leist, Marcel; Elsner, Angelika; Brigelius-Flohe, Regina
CS USA
SO Methods in Enzymology (1997), 282(Vitamins and Coenzymes, Part L), 297-310
CODEN: MENZAU; ISSN: 0076-6879
PB Academic
DT Journal
LA English

L5 ANSWER 39 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1996:69202 CAPLUS
DN 124:144421
TI Novel urinary metabolite of .alpha.-tocopherol, 2,5,7,8-tetramethyl-2(2'-carboxyethyl)-6-hydroxychroman, as an indicator of an adequate vitamin E supply?
AU Schultz, Manfred; Leist, Marcel; Petrzika, Marion; Gassmann, Berthold; Brigelius-Flohe, Regina
CS Department Vitamins and Atherosclerosis, German Institute Human Nutrition, Potsdam-Rehbrucke, D-14558, Germany
SO American Journal of Clinical Nutrition (1995), 62(6, Suppl.), 1527S-34S
CODEN: AJCNAC; ISSN: 0002-9165
PB American Society for Clinical Nutrition
DT Journal
LA English

L5 ANSWER 40 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1991:427028 CAPLUS

DN 115:27028
TI Serum .gamma.-glutamyl transpeptidase in chronic extrahepatic cholestasis
AU Castro-E-Silva, O., Jr.; Franco, C. F. F.; Souza, M. E. J.; Picinato, M. A. N. C.; Santos, J. S.; Ceneviva, R.
CS Fac. Med. Ribeirao Preto, Univ. Sao Paulo, Ribeirao Preto, 14049, Brazil
SO Brazilian Journal of Medical and Biological Research (1990), 23(6-7), 515-18
CODEN: BJMRDK; ISSN: 0100-879X
DT Journal
LA English

L5 ANSWER 41 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1985:497831 CAPLUS
DN 103:97831
TI Preparation and CD spectra of cobalt(III) complexes with S-(carboxymethyl)-L-cysteinate and its analogs
AU Okamoto, Kenichi; Suzuki, Masutaro; Einaga, Hisahiko; Hidaka, Jinsai
CS Dep. Chem., Univ. Tsukuba, Ibaraki, 305, Japan
SO Bulletin of the Chemical Society of Japan (1985), 58(6), 1807-11
CODEN: BCSJA8; ISSN: 0009-2673
DT Journal
LA English

=> d l5 22 all

L5 ANSWER 22 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2001:120242 CAPLUS
DN 134:236753
TI .alpha.- and .gamma.-tocotrienols are metabolized to carboxyethyl-hydroxychroman derivatives and excreted in human urine
AU Lodge, John K.; Ridlington, James; Leonard, Scott; Vaule, Heather; Traber, Maret G.
CS Linus Pauling Institute, Oregon State University, Corvallis, OR, 97331-6512, USA
SO Lipids (2001), 36(1), 43-48
CODEN: LPDSAP; ISSN: 0024-4201
PB AOCS Press
DT Journal
LA English
CC 18-2 (Animal Nutrition)
AB Limited information is available regarding metab. of vitamin E forms, esp. the tocotrienols. Carboxyethyl-hydroxychromans (.alpha.- and .gamma.-**CEHC**) are human urinary metabolites of .alpha.- and .gamma.-tocopherols, resp. To evaluate whether tocotrienols are also metabolized and excreted as urinary **CEHC**, urine was monitored following tocotrienol supplementation. Complete (24 h) urine collections were obtained for 2 d prior to (baseline), the day of, and 2 d after human subjects (n = 6) ingested tocotrienol supplements. The subjects consumed 125 mg .gamma.-tocotrienyl acetate the first week, then the next week 500 mg; then 125 mg .alpha.-tocotrienyl acetate was administered the third week, followed by 500 mg the fourth week. Urinary .alpha.- and .gamma.-**CEHC** were measured by high-performance liq. chromatog. with electrochem. detection. Urinary .gamma.-**CEHC** levels rose about four- to sixfold in response to the two doses of .gamma.-tocotrienol and then returned to baseline the following day. Significant ($P < 0.0001$) increases in urinary .alpha.-**CEHC** were obsd. only following ingestion of 500 mg .alpha.-tocotrienyl acetate. Typically, 1-2% of .alpha.-tocotrienyl acetates or 4-6% of .gamma.-tocotrienyl acetates were recovered as their resp. urinary **CEHC** metabolites. A .gamma.-**CEHC** excretion time course showed an increase in urinary .gamma.-**CEHC** at 6 h and a peak at 9 h following ingestion of 125 mg

.gamma.-tocotrienyl acetate. In summary, tocotrienols, like tocopherols, are metabolized to **CEHC**; however, the quantities excreted in human urine are small in relation to dose size.

ST vitamin E metabolite tocotrienol urine

IT Urine
(.alpha.- and .gamma.-tocotrienols metab. to carboxyethyl-hydroxychroman derivs. and excretion in human urine)

IT 1406-18-4, Vitamin E 1721-51-3, .alpha.-Tocotrienol 14101-61-2, .gamma.-Tocotrienol
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.alpha.- and .gamma.-tocotrienols metab. to carboxyethyl-hydroxychroman derivs. and excretion in human urine)

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L5 ANSWER 23 OF 41 CAPLUS COPYRIGHT 2003 ACS

AN 2000:895441 CAPLUS

DN 134:192659

TI Bioavailability and potency of natural-source and all-racemic .alpha.-tocopherol in the human: A dispute

AU Hoppe, P. P.; Krennrich, G.

CS Nutrition Research Station, BASF Aktiengesellschaft, Offenbach, 76877, Germany

SO European Journal of Nutrition (2000), 39(5), 183-193
CODEN: EJNUFZ; ISSN: 1436-6207

PB Steinkopff Verlag

DT Journal

LA English

CC 18-2 (Animal Nutrition)

AB Alpha-tocopherol occurs in nature as a single stereoisomer (RRR) while synthetic vitamin E is a mixt. of eight stereoisomers (all-racemic, all-rac). The presently accepted ratio of biopotency (RRR: all-rac) is 1.36, based on the fetal resorption test in rats. This ratio has been disputed for humans. Clin. endpoint studies in humans are lacking, but

plasma responses to RRR-and all-rac were measured in bioavailability studies. In nine studies comparing unlabeled forms, the ratio of plasma parameters (AUC, Cmax or steady-state concn.) concurred with the accepted ratio of biopotency within accepted bounds of equivalence. Four recent studies with simultaneous application of trideutero-RRR and hexadeutero-all-rac resulted in ratios of up to 2 for plasma, and of .apprx. 2.7 and .apprx. 3.4 for .alpha.-**CEHC** (a urinary metabolite) and umbilical cord plasma, resp. Because these results have been widely assumed to reflect the difference in biopotency, this has prompted a proposal to the Food and Nutrition Board, National Academy of Sciences, USA to change the biopotency factor to 2:1. We challenge the validity of bioavailability data in lieu of clin. endpoints. Because RRR and all-rac are not chem. identical and differ in plasma and tissue kinetics and metab., the ratio of bioavailability parameters does not reflect the ratio of biopotency. This needs to be detd. in adequately designed studies using clin. and biochem. endpoints. Until such studies have been performed it does not appear prudent to exchange the presently accepted ratio based on valid bioassays, albeit in a model animal, for another that is based on erroneous conclusions from human studies.

ST alpha tocopherol bioavailability human

IT Nutrition, animal
(bioavailability and potency of natural-source and all-racemic .alpha.-tocopherol in the human: A dispute)

IT 59-02-9, .alpha.-Tocopherol 10191-41-0, all-rac-.alpha.-Tocopherol
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(bioavailability and potency of natural-source and all-racemic .alpha.-tocopherol in the human: A dispute)

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L5 ANSWER 24 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:788255 CAPLUS
DN 134:55952
TI Production of LLU-.alpha. following an oral administration of .gamma.-tocotrienol or .gamma.-tocopherol to rats
AU Hattori, Akihiro; Fukushima, Takeshi; Yoshimura, Hiroyuki; Abe, Kouichi; Imai, Kazuhiro
CS Department of Bio-Analytical Chemistry, Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, 113-0033, Japan
SO Biological & Pharmaceutical Bulletin (2000), 23(11), 1395-1397
CODEN: BPBLEO; ISSN: 0918-6158
PB Pharmaceutical Society of Japan
DT Journal
LA English
CC 18-2 (Animal Nutrition)
Section cross-reference(s): 13
AB An oral administration of .gamma.-tocotrienol (.gamma.-T3) or .gamma.-tocopherol (.gamma.-Toc) to male rats caused an increase of the concn. of 2,7,8-trimethyl-2-(.beta.-carboxyethyl)-6-hydroxy chroman (LLU-.alpha., .gamma.-**CEHC**), a natriuretic compd., in plasma with a Tmax of 9 h. The configuration at C-2 of LLU-.alpha. produced from .gamma.-T3 or .gamma.-Toc was assigned as S-form by an HPLC equipped with a chiral column. These data indicated that LLU-.alpha. was produced not only from .gamma.-Toc but also .gamma.-T3, without racemization at C-2 in rats.
ST LLU tocotrienol tocopherol metab; chroman deriv formation tocotrienol tocopherol; hydroxychroman deriv formation tocotrienol tocopherol
IT 7616-22-0, .gamma.-Tocopherol 14101-61-2, .gamma.-Tocotrienol
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(LLU-.alpha. prodn. following an oral administration of .gamma.-tocotrienol or .gamma.-tocopherol to rats)
IT 178167-88-9
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(LLU-.alpha. prodn. following an oral administration of

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        .gamma.-tocotrienol or .gamma.-tocopherol to rats)
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              structure diagram, plus NTE and SEQ fields
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              its structure diagram
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L5 ANSWER 25 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:759916 CAPLUS
DN 134:36796
TI .gamma.-Tocopherol and its major metabolite, in contrast to .alpha.-tocopherol, inhibit cyclooxygenase activity in macrophages and epithelial cells
AU Jiang, Qing; Elson-Schwab, Ilan; Courtemanche, Chantal; Ames, Bruce N.
CS Division of Biochemistry and Molecular Biology, University of California, Berkeley, CA, 94720, USA
SO Proceedings of the National Academy of Sciences of the United States of America (2000), 97(21), 11494-11499
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
CC 1-7 (Pharmacology)
AB Cyclooxygenease-2 (COX-2)-catalyzed synthesis of prostaglandin E2 (PGE2) plays a key role in inflammation and its assocd. diseases, such as cancer and vascular heart disease. Here we report that .gamma.-tocopherol (.gamma.T) reduced PGE2 synthesis in both lipopolysaccharide (LPS)-stimulated RAW264.7 macrophages and IL-1.beta.-treated A549 human epithelial cells with an apparent IC50 of 7.5 and 4 .mu.M, resp. The major metabolite of dietary .gamma.T, 2,7,8-trimethyl-2-(.beta.-carboxyethyl)-6-hydroxychroman (.gamma.-**CEHC**), also exhibited an inhibitory effect, with an IC50 of .apprxeq.30 .mu.M in these cells. In contrast, .alpha.-tocopherol at 50 .mu.M slightly reduced (25%) PGE2 formation in macrophages, but had no effect in epithelial cells. The inhibitory effects of .gamma.T and .gamma.-**CEHC** stemmed from their inhibition of COX-2 activity, rather than affecting protein expression or substrate availability, and appeared to be independent of antioxidant activity. .gamma.-**CEHC** also inhibited PGE2 synthesis when exposed for 1 h to COX-2-preinduced cells followed by the addn. of arachidonic acid (AA), whereas under similar conditions, .gamma.T required an 8- to 24-h incubation period to cause the inhibition. The inhibitory potency of .gamma.T and .gamma.-**CEHC** was diminished by an increase in AA concn., suggesting that they might compete with AA at the active site of COX-2. We also obsd. a moderate redn. of nitrite accumulation and suppression of inducible nitric oxide synthase expression by .gamma.T in lipopolysaccharide-treated macrophages. These findings indicate that .gamma.T and its major metabolite possess anti-inflammatory activity and that .gamma.T at physiol. concns. may be important in human disease prevention.
ST gamma tocopherol cyclooxygenase 2 antiinflammatory
IT Antioxidants
(pharmaceutical; .gamma.-Tocopherol and its major metabolite inhibit

cyclooxygenase activity in macrophages and epithelial cells)
IT 39391-18-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cyclooxygenase-2; .gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 59-02-9, .alpha.-Tocopherol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 178167-88-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MFM (Metabolic formation); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 7616-22-0, .gamma.-Tocopherol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 363-24-6, PGE2 41598-07-6, PGD2 125978-95-2, Nitric oxide synthase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 155976-51-5, 8-Isoprostane
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
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L5 ANSWER 26 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:728570 CAPLUS
DN 134:16205
TI Urinary .alpha.-tocopherol metabolites in .alpha.-tocopherol transfer protein-deficient patients
AU Schuelke, Markus; Elsner, Angelika; Finckh, Barbara; Kohlschutter, Alfried; Hubner, Christoph; Brigelius-Flohe, Regina
CS Department of Neuropediatrics, Charite University Hospital, Humboldt University Berlin, Berlin, D-13353, Germany
SO Journal of Lipid Research (2000), 41(10), 1543-1551
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
CC 14-14 (Mammalian Pathological Biochemistry)
AB Patients with .alpha.-tocopherol transfer protein (.alpha.-TTP) defects experience neurol. symptoms characteristic of vitamin E deficiency and depend on continuous high .alpha.-tocopherol supplements. The authors investigated the excretion of 2,5,7,8-tetramethyl-2(2'-carboxyethyl)-6-hydroxychroman (.alpha.-**CEHC**), a urinary metabolite of .alpha.-tocopherol, as a putative marker for the .alpha.-tocopherol status of .alpha.-TTP-deficient patients and control subjects. In three patients vitamin E supplementation was stopped for short periods of time, during which plasma .alpha.-tocopherol concns. and urinary .alpha.-**CEHC** excretion were measured. In the patients, plasma .alpha.-tocopherol decreased below normal (<5 .mu.mol/l) but .alpha.-**CEHC** excretion remained above the range of unsupplemented control subjects (0.118-0.306

mg/day). In healthy subjects, however, .alpha.-**CEHC** excretion was increased only after surpassing a plasma .alpha.-tocopherol threshold of 30-40 .mu.mol/l. Such a threshold did not exist in patients. The general mechanism of .alpha.-tocopherol degrdn. did not appear to differ between patients and control subjects. The presumed mechanism of .omega.- and subsequent .beta.-oxidn. was supported by the detection of .alpha.-CPHC, an .alpha.-**CEHC** homolog with a side chain longer by 3 carbon atoms, both in supplemented patients and in control subjects.

ST urinary alpha tocopherol metabolite transfer protein deficiency

IT Oxidation
(biol., .beta.- and .omega.-oxidn.; urinary .alpha.-tocopherol metabolite in .alpha.-tocopherol transfer protein-deficient (ataxia with isolated vitamin E deficiency) humans in relation to)

IT Biomarkers (biological responses)
Urine
(urinary .alpha.-tocopherol metabolite in .alpha.-tocopherol transfer protein-deficient (ataxia with isolated vitamin E deficiency) humans)

IT Transport proteins
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(.alpha.-tocopherol transfer, deficiency; urinary .alpha.-tocopherol metabolite in .alpha.-tocopherol transfer protein-deficient (ataxia with isolated vitamin E deficiency) humans)

IT Blood plasma
(.alpha.-tocopherol; urinary .alpha.-tocopherol metabolite in .alpha.-tocopherol transfer protein-deficient (ataxia with isolated vitamin E deficiency) humans)

IT 59-02-9, .alpha.-Tocopherol
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(urinary .alpha.-tocopherol metabolite in .alpha.-tocopherol transfer protein-deficient (ataxia with isolated vitamin E deficiency) humans)

IT 4072-32-6
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(urinary .alpha.-tocopherol metabolite in .alpha.-tocopherol transfer protein-deficient (ataxia with isolated vitamin E deficiency) humans)

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AN 2000:456026 CAPLUS
DN 133:149828
TI Overview of studies on vitamin E metabolism - Missing link of vitamin E metabolism
AU Nakamura, Tetsuya
CS Department of Chemistry, Shibaura Institute of Technology, Fukasaku, Ohmiya, 330-8570, Japan
SO Bitamin (2000), 74(5-6), 255-261
CODEN: BTMNA7; ISSN: 0006-386X
PB Nippon Bitamin Gakkai
DT Journal; General Review
LA Japanese
CC 18-0 (Animal Nutrition)
AB A review with 38 refs. Simon's metabolites (.alpha.-tocopheronic acid and its .gamma.-lactone) have long been considered the main metabolites of .alpha.-tocopherol in urine. A hypothetical pathway for the biol. formation of these metabolites was proposed via the tocopheryl quinone route. From the initial detection of a carboxyethyl hydroxychroman (**CEHC**)-type metabolite of .delta.-tocopherol (via the retention of the chroman ring route) in rat urine, corresponding metabolites of .alpha.-tocopherol and .gamma.-tocopherol were subsequently found. It is particularly interesting that .gamma.-**CEHC** (LLU-.alpha.) was found in human urine as a natriuretic factor. Whether Simon's metabolites are physiol. significant or are artifacts due to sample treatment is not certain at present. To identify them as conjugated forms is warranted. The lack of intermediary metabolites of vitamin E homologues still remains as a missing link in understanding the vitamin E catabolism.
ST review vitamin E tocopherol intermediary metab
IT Nutrition, animal
(vitamin E and tocopherols intermediary metab.)
IT Tocopherols
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(vitamin E and tocopherols intermediary metab.)
IT 1406-18-4, Vitamin e
RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)
(vitamin E and tocopherols intermediary metab.)

=> d l5 25 all

L5 ANSWER 25 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 2000:759916 CAPLUS
DN 134:36796
TI .gamma.-Tocopherol and its major metabolite, in contrast to .alpha.-tocopherol, inhibit cyclooxygenase activity in macrophages and epithelial cells
AU Jiang, Qing; Elson-Schwab, Ilan; Courtemanche, Chantal; Ames, Bruce N.
CS Division of Biochemistry and Molecular Biology, University of California, Berkeley, CA, 94720, USA
SO Proceedings of the National Academy of Sciences of the United States of America (2000), 97(21), 11494-11499
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
CC 1-7 (Pharmacology)
AB Cyclooxygenease-2 (COX-2)-catalyzed synthesis of prostaglandin E2 (PGE2) plays a key role in inflammation and its assocd. diseases, such as cancer and vascular heart disease. Here we report that .gamma.-tocopherol (.gamma.T) reduced PGE2 synthesis in both lipopolysaccharide (LPS)-stimulated RAW264.7 macrophages and IL-1.beta.-treated A549 human epithelial cells with an apparent IC50 of 7.5 and 4 .mu.M, resp. The major metabolite of dietary .gamma.T, 2,7,8-trimethyl-2-(.beta.-carboxyethyl)-6-hydroxychroman (.gamma.-**CEHC**), also exhibited an inhibitory effect, with an IC50 of .apprxeq.30 .mu.M in these cells. In contrast, .alpha.-tocopherol at 50 .mu.M slightly reduced (25%) PGE2 formation in macrophages, but had no effect in epithelial cells. The inhibitory effects of .gamma.T and .gamma.-**CEHC** stemmed from their inhibition of COX-2 activity, rather than affecting protein expression or substrate availability, and appeared to be independent of antioxidant activity. .gamma.-**CEHC** also inhibited PGE2 synthesis when exposed for 1 h to COX-2-preinduced cells followed by the addn. of arachidonic acid (AA), whereas under similar conditions, .gamma.T required an 8- to 24-h incubation period to cause the inhibition. The inhibitory potency of .gamma.T and .gamma.-**CEHC** was diminished by an increase in AA concn., suggesting that they might compete with AA at the active site of COX-2. We also obsd. a moderate redn. of nitrite accumulation and suppression of inducible nitric oxide synthase expression by .gamma.T in lipopolysaccharide-treated macrophages. These findings indicate that .gamma.T and its major metabolite possess anti-inflammatory activity and that .gamma.T at physiol. concns. may be important in human disease prevention.
ST gamma tocopherol cyclooxygenase 2 antiinflammatory
IT Antioxidants
(pharmaceutical; .gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 39391-18-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cyclooxygenase-2; .gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 59-02-9, .alpha.-Tocopherol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 178167-88-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MFM (Metabolic formation); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase

activity in macrophages and epithelial cells)
IT 7616-22-0, .gamma.-Tocopherol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 363-24-6, PGE2 41598-07-6, PGD2 125978-95-2, Nitric oxide synthase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
IT 155976-51-5, 8-Isoprostane
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(.gamma.-Tocopherol and its major metabolite inhibit cyclooxygenase activity in macrophages and epithelial cells)
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L5 ANSWER 35 OF 41 CAPLUS COPYRIGHT 2003 ACS
AN 1999:437875 CAPLUS
DN 131:198876
TI Vitamin E: function and metabolism
AU Brigelius-Flohe, Regina; Traber, Maret G.
CS German Institute of Human Nutrition, Bergholz-Rehbrucke, D-14558, Germany
SO FASEB Journal (1999), 13(10), 1145-1155
CODEN: FAJOEC; ISSN: 0892-6638
PB Federation of American Societies for Experimental Biology
DT Journal; General Review
LA English
CC 18-0 (Animal Nutrition)
AB A review with 112 refs. Although vitamin E has been known as an essential nutrient for reprodn. since 1922, we are far from understanding the mechanisms of its physiol. functions. Vitamin E is a term for a group of tocopherols and tocotrienols, of which .alpha.-tocopherol has the highest biol. activity. Due to the potent antioxidant properties of tocopherols, the impact of .alpha.-tocopherol in the prevention of chronic diseases believed to be assocd. with oxidative stress has often been studied and beneficial effects have been demonstrated. Recent observations that the .alpha.-tocopherol transfer protein in the liver specifically sorts out RRR-.alpha.-tocopherol from all incoming tocopherols for incorporation into blood plasma lipoproteins, and that .alpha.-tocopherol has signaling functions in vascular smooth muscle cells that cannot be exerted by other forms of tocopherol with similar antioxidative properties, have raised interest in the roles of vitamin E beyond its antioxidative functions. The .gamma.-tocopherol may have functions apart from being an antioxidant. It is a nucleophile able to trap electrophilic mutagens in lipophilic compartments and it generates a metabolite that facilitates natriuresis. The metab. of vitamin E is equally unclear. Excess .alpha.-tocopherol is converted into 2,5,7,8-tetramethyl-2(2'-carboxyethyl)-6-hydroxychroman (.alpha.-**CEHC**) and excreted in urine. Other tocopherols, like .gamma.- and .delta.-tocopherol, are almost quant. degraded and excreted in the urine as the corresponding CEHCs. The all-rac-.alpha.-tocopherol compared to RRR-.alpha.-tocopherol is preferentially degraded to .alpha.-**CEHC**. Thus, there may be a specific mol. role of RRR-.alpha.-tocopherol that is regulated by a system that sorts, distributes, and degrades the different forms of vitamin E, but has not yet been identified. We try to summarize current knowledge on the function of vitamin E, with emphasis on its antioxidant vs. other properties, the preference of the organism for RRR-.alpha.-tocopherol, and its metab. to CEHCs.
ST review nutrition vitamin E metab function

IT Nutrition, animal
(vitamin E nutritional function and metab.)
IT 1406-18-4, Vitamin e
RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)
(vitamin E nutritional function and metab.)
RE.CNT 112 THERE ARE 112 CITED REFERENCES AVAILABLE FOR THIS RECORD
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=> s cox 2
        11379 COX

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       7755459 2
L6        4989 COX 2
               (COX(W)2)

=> e skin
E1           3     SKIMSTOCK/BI
E2           1     SKIMSTOCKS/BI
E3      189684 --> SKIN/BI
E4           1     SKIN1/BI
E5           1     SKIN19/BI
E6          30     SKIN2/BI
E7           3     SKIN2TM/BI
E8           2     SKIN2ZK/BI
E9           1     SKIN2ZK1301/BI
E10          1     SKINA/BI
E11          4     SKINAKAS/BI
E12          6     SKINATH/BI

=> s e3
L7      189684 SKIN/BI

=> s l7 and l6
L8         170 L7 AND L6

=> d l8 140-170

L8   ANSWER 140 OF 170  CAPLUS  COPYRIGHT 2003 ACS
AN   1999:504149  CAPLUS
DN   131:252216
TI   Chemopreventive activity of celecoxib, a specific cyclooxygenase-2
     inhibitor, and indomethacin against ultraviolet light-induced skin
     carcinogenesis
AU   Fischer, Susan M.; Lo, Herng-Hsang; Gordon, Gary B.; Seibert, Karen;
     Kelloff, Gary; Lubet, Ronald A.; Conti, Claudio J.
CS   Science Park-Research Division, The University of Texas M. D. Anderson
     Cancer Center, Smithville, TX, 78957, USA
SO   Molecular Carcinogenesis (1999), 25(4), 231-240
     CODEN: MOCAE8; ISSN: 0899-1987
PB   Wiley-Liss, Inc.
DT   Journal
LA   English
RE.CNT  41    THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8   ANSWER 141 OF 170  CAPLUS  COPYRIGHT 2003 ACS
AN   1999:392167  CAPLUS
DN   131:39377
TI   Cancer chemopreventive activity of resveratrol
AU   Jang, M.; Pezzuto, J. M.
CS   Dep. Surgical Oncology, Univ. Illinois, Chicago, IL, 60612, USA
SO   Drugs under Experimental and Clinical Research (1999), 25(2/3), 65-77
     CODEN: DECRDP; ISSN: 0378-6501
PB   Bioscience Ediprint Inc.
DT   Journal
LA   English
RE.CNT  93    THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8   ANSWER 142 OF 170  CAPLUS  COPYRIGHT 2003 ACS
AN   1999:330046  CAPLUS
DN   130:332886
TI   Use of sesquiterpene lactones for treatment of severe inflammatory
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disorders
IN Hwang, Daniel H.; Fischer, Nikolaus H.
PA Board of Supervisors of Louisiana State University and Agricultural and Mechanical College, USA
SO U.S., 15 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5905089	A	19990518	US 1998-59480	19980413
PRAI US 1997-80224	A	19970414		

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 143 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1999:252443 CAPLUS
DN 131:97867
TI N-methyl D-aspartate induced mechanical allodynia is blocked by nitric oxide synthase and cyclooxygenase-2 inhibitors
AU Dolan, Sharron; Nolan, Andrea M.
CS Division of Veterinary Pharmacology, Department of Veterinary Preclinical Studies, University of Glasgow Veterinary School, Glasgow, G61 1QH, UK
SO NeuroReport (1999), 10(3), 449-452
CODEN: NERPEZ; ISSN: 0959-4965
PB Lippincott Williams & Wilkins
DT Journal
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 144 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1999:249760 CAPLUS
DN 131:100522
TI Metabolic targets of cancer chemoprevention: Interruption of tumor development by inhibitors of arachidonic acid metabolism
AU Marks, F.; Furstenberger, G.; Muller-Decker, K.
CS Tumor Cell Regulation, Department B 0500, German Cancer Research Center, Heidelberg, D-69120, Germany
SO Recent Results in Cancer Research (1999), 151(Chemoprevention of Cancer), 45-67
CODEN: RRCRBU; ISSN: 0080-0015
PB Springer-Verlag
DT Journal; General Review
LA English
RE.CNT 109 THERE ARE 109 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 145 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1999:203288 CAPLUS
DN 131:39144
TI Pharmacodynamics and pharmacokinetics of tolfenamic acid in ruminating calves: evaluation in models of acute inflammation
AU Lees, P.; McKellar, Q. A.; Foot, R.; Gettinby, G.
CS Department of Veterinary Basic Sciences, The Royal Veterinary College, Hatfield, AL9 7TA, UK
SO Veterinary Journal (1998), 155(3), 275-288
CODEN: VTJRFP; ISSN: 1090-0233
PB Bailliere Tindall Ltd.
DT Journal
LA English

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 146 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1999:93913 CAPLUS
DN 130:306145
TI Resveratrol blocks eicosanoid production and chemically-induced cellular transformation: implications for cancer chemoprevention
AU Jang, Meishiang; Pezzuto, John M.
CS Program for Collaborative Research in the Pharmaceutical Science, and Department of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, and Department of Surgical Oncology, College of Medicine, University of Illinois at Chicago, Chicago, IL, 60612, USA
SO Pharmaceutical Biology (Lisse, Netherlands) (1998), 36(Suppl.), 28-34
CODEN: PHBIFC; ISSN: 1388-0209
PB Swets & Zeitlinger B.V.
DT Journal
LA English
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 147 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1999:17363 CAPLUS
DN 130:232038
TI Effects of resveratrol on 12-O-tetradecanoylphorbol-13-acetate-induced oxidative events and gene expression in mouse **skin**
AU Jang, Meishiang; Pezzuto, John M.
CS College of Pharmacy, Department of Medicinal Chemistry and Pharmacognosy, Program for Collaborative Research in the Pharmaceutical Science, University of Illinois at Chicago, Chicago, IL, 60612, USA
SO Cancer Letters (Shannon, Ireland) (1998), 134(1), 81-89
CODEN: CALEDQ; ISSN: 0304-3835
PB Elsevier Science Ireland Ltd.
DT Journal
LA English
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L8 ANSWER 148 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1999:1230 CAPLUS
DN 130:204808
TI An analysis from clinicoepidemiological data of the principal adverse events from the **COX-2**-selective NSAID nimesulide, with particular reference to hepatic injury
AU Rainsford, K. D.
CS Biomedical Research Centre, Division of Biomedical Sciences, Sheffield Hallam University, Sheffield, S1 1WB, UK
SO Inflammopharmacology (1998), 6(3), 203-221
CODEN: IAOAES; ISSN: 0925-4692
PB Kluwer Academic Publishers
DT Journal
LA English
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 149 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:711828 CAPLUS
DN 130:79822
TI Pharmacological analysis of cyclooxygenase-1 in inflammation
AU Smith, Christopher J.; Zhang, Yan; Koboldt, Carol M.; Muhammad, Jerry; Zweifel, Ben S.; Shaffer, Alex; Talley, John J.; Masferrer, Jaime L.; Seibert, Karen; Isakson, Peter C.

CS Searle Research and Development, St. Louis, MO, 63198, USA
SO Proceedings of the National Academy of Sciences of the United States of America (1998), 95(22), 13313-13318
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L8 ANSWER 150 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:709449 CAPLUS
DN 129:310615
TI Possible background mechanisms of the effectiveness of cyclooxygenase-2 inhibitors in the treatment of rheumatoid arthritis
AU Katori, M.; Majima, M.; Harada, Y.
CS Department Pharmacology, School Medicine, Kitasato University, Japan
SO Inflammation Research (1998), 47(Suppl.2), S107-S111
CODEN: INREFB; ISSN: 1023-3830
PB Birkhaeuser Verlag
DT Journal
LA English

L8 ANSWER 151 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:700324 CAPLUS
DN 130:23533
TI Transcriptional regulation of cyclooxygenase-2 in mouse **skin** carcinoma cells: regulatory role of CCAAT/enhancer-binding proteins in the differential expression of cyclooxygenase-2 in normal and neoplastic tissues
AU Kim, Youngsoo; Fischer, Susan M.
CS Department of Carcinogenesis, M. D. Anderson Cancer Center, Science Park-Research Division, University of Texas, Smithville, TX, 78957, USA
SO Journal of Biological Chemistry (1998), 273(42), 27686-27694
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
RE.CNT 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L8 ANSWER 152 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:638045 CAPLUS
DN 129:340137
TI Cholecalciferol induces prostaglandin E2 biosynthesis and transglutaminase activity in human keratinocytes
AU Kanekura, Takuro; Laulederkind, Stanley J. F.; Kirtikara, Kanyawim; Goorha, Sarita; Ballou, Leslie R.
CS Department of Medicine, College of Medicine, University of Tennessee, Memphis, TN, USA
SO Journal of Investigative Dermatology (1998), 111(4), 634-639
CODEN: JIDEAE; ISSN: 0022-202X
PB Blackwell Science, Inc.
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L8 ANSWER 153 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:575527 CAPLUS
DN 129:310592
TI Cyclooxygenase-2 inhibitor NS-398 improves survival and restores leukocyte

counts in burn infection
AU Shoup, Margo; He, Li-Ke; Liu, Hong; Shankar, Ravi; Gamelli, Richard
CS Loyola University Medical Center, Burn and Shock Trauma Institute and the Department of Surgery, Maywood, IL, 60153, USA
SO Journal of Trauma: Injury, Infection, and Critical Care (1998), 45(2), 215-221
CODEN: JOTRFA; ISSN: 1079-6061
PB Williams & Wilkins
DT Journal
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L8 ANSWER 154 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:536774 CAPLUS
DN 129:240323
TI Activation of the epidermal platelet-activating factor receptor results in cytokine and cyclooxygenase-2 biosynthesis
AU Pei, Yong; Barber, Lisa A.; Murphy, Robert C.; Johnson, Christopher A.; Kelley, Susan W.; Dy, Lady C.; Fertel, Richard H.; Nguyen, Thanh M.; Williams, David A.; Travers, Jeffrey B.
CS Departments Dermatology Pediatrics, Indiana University School Medicine, Indianapolis, IN, 46202, USA
SO Journal of Immunology (1998), 161(4), 1954-1961
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L8 ANSWER 155 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:502947 CAPLUS
DN 129:211426
TI Pharmacological evaluation of 1-(carboxymethyl)-3,5-diphenyl-2-methylbenzene, a novel arylacetic acid with potential anti-inflammatory properties
AU Cutler, S. J.; De Witt Blanton, C., Jr.; Akin, D. T.; Steinberg, F. B.; Moore, A. B.; Lott, J. A.; Price, T. C.; May, S. W.; Pollock, S. H.
CS Dep. Pharmaceutical Sci., Mercer Univ., Atlanta, GA, 30341, USA
SO Inflammation Research (1998), 47(7), 316-324
CODEN: INREFB; ISSN: 1023-3830
PB Birkhaeuser Verlag
DT Journal
LA English

L8 ANSWER 156 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:483336 CAPLUS
DN 129:298092
TI Measurement of cyclooxygenase inhibition in vivo: a study of two non-steroidal anti-inflammatory drugs in sheep
AU Cheng, Z.; Nolan, A. M.; Mckellar, Q. A.
CS Division of Veterinary Pharmacology, Department of Veterinary Preclinical Studies, University of Glasgow, Glasgow, G61 1QH, UK
SO Inflammation (New York) (1998), 22(4), 353-366
CODEN: INFLD4; ISSN: 0360-3997
PB Plenum Publishing Corp.
DT Journal
LA English
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L8 ANSWER 157 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:345378 CAPLUS
DN 129:78548
TI **Cox-2** expression is induced by UVB exposure in human **skin**: implications for the development of **skin** cancer
AU Buckman, ShaAvhree Y.; Gresham, Alane; Hale, Pamela; Hruza, George; Anast, Jason; Masferrer, Jaime; Pentland, Alice P.
CS Washington University School of Medicine, St. Louis, MO, USA
SO Carcinogenesis (1998), 19(5), 723-729
CODEN: CRNGDP; ISSN: 0143-3334
PB Oxford University Press
DT Journal
LA English
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 158 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1998:236085 CAPLUS
DN 129:710
TI Budesonide epimer R or dexamethasone selectively inhibit platelet-activating factor-induced or interleukin 1.beta.-induced DNA binding activity of cis-acting transcription factors and cyclooxygenase-2 gene expression in human epidermal keratinocytes
AU Lukiw, Walter J.; Pelaez, Ricardo Palacios; Martinez, Jorge; Bazan, Nicolas G.
CS Louisiana State University Medical Center, Neuroscience Center of Excellence and Department of Ophthalmology, School of Medicine, New Orleans, LA, 70112-2272, USA
SO Proceedings of the National Academy of Sciences of the United States of America (1998), 95(7), 3914-3919
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 159 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1997:593773 CAPLUS
DN 127:260856
TI The co-culture of dermal fibroblasts with human epidermal keratinocytes induces increased prostaglandin E2 production and cyclooxygenase 2 activity in fibroblasts
AU Sato, Takashi; Kirimura, Yoshiaki; Mori, Yo
CS Department of Biochemistry, School of Pharmacy, Tokyo University of Pharmacy and Life Science, Tokyo, 192-03, Japan
SO Journal of Investigative Dermatology (1997), 109(3), 334-339
CODEN: JIDEAE; ISSN: 0022-202X
PB Blackwell
DT Journal
LA English

L8 ANSWER 160 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1997:582514 CAPLUS
DN 127:242963
TI Effect of topically applied cyclooxygenase-2-selective inhibitors on arachidonic acid- and tetradecanoylphorbol acetate-induced dermal inflammation in the mouse
AU Puignero, Violant; Queralt, Josep
CS Unitat de Fisiologia, Facultat de Farmacia, Universitat de Barcelona, Barcelona, 08028, Spain
SO Inflammation (New York) (1997), 21(4), 431-442

CODEN: INFLD4; ISSN: 0360-3997
PB Plenum
DT Journal
LA English

L8 ANSWER 161 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1997:514963 CAPLUS
DN 127:214791
TI Suppressive effects of tranilast on the expression of inducible cyclooxygenase (COX2) in interleukin-1.beta.-stimulated fibroblasts
AU Inoue, Hajime; Ohshima, Hideo; Kono, Hiroyuki; Yamanaka, Miwa; Kubota, Takako; Aihara, Masaki; Hiroi, Tomoko; Yago, Nagasumi; Ishida, Hirotomo
CS DEPARTMENT OF PLASTIC AND RECONSTRUCTIVE SURGERY, ST. MARIANNA UNIVERSITY SCHOOL OF MEDICINE, KAWASAKI, 216, Japan
SO Biochemical Pharmacology (1997), 53(12), 1941-1944
CODEN: BCPCA6; ISSN: 0006-2952
PB Elsevier
DT Journal
LA English

L8 ANSWER 162 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1997:334710 CAPLUS
DN 127:6195
TI Crosslinked silicones forming water- and oil-repellent soft films useful in coatings and cosmetics
IN Iyanagi, Koichi
PA Pola Chemical Industries, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09071657	A2	19970318	JP 1996-19132	19960205
PRAI	JP 1995-183583		19950627		

L8 ANSWER 163 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1997:331870 CAPLUS
DN 127:6196
TI Crosslinked silicones forming water- and oil-repellent soft films useful in coatings and cosmetics
IN Iyanagi, Koichi
PA Pola Chemical Industries, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09071656	A2	19970318	JP 1996-19131	19960205
PRAI	JP 1995-183580		19950627		

L8 ANSWER 164 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1997:114096 CAPLUS
DN 126:140839
TI Induction of cyclooxygenase-2 expression by peroxisome proliferators and non-tetradecanoylphorbol 12,13-myristate-type tumor promoters in immortalized mouse liver cells
AU Ledwith, Brian J.; Pauley, Cindy J.; Wagner, Linda K.; Rokos, Carrie L.; Alberts, David W.; Manam, Sujata

CS Depts. of Genetic and Cellular Toxicology, Merck Res. Lab., West Point, PA, 19486, USA
SO Journal of Biological Chemistry (1997), 272(6), 3707-3714
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English

L8 ANSWER 165 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1997:48225 CAPLUS
DN 126:69716
TI Pharmacokinetics and pharmacodynamics of ketoprofen enantiomers in the horse
AU Landoni, M. F.; Lees, P.
CS Facultad de Ciencias Veterinarias, Universidad Nacional de la Plata, La Plata, 1900, Argent.
SO Journal of Veterinary Pharmacology and Therapeutics (1996), 19(6), 466-474
CODEN: JVPTD9; ISSN: 0140-7783
PB Blackwell
DT Journal
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AN 1996:657461 CAPLUS
DN 125:316599
TI A long-term study to evaluate the safety and efficacy of meloxicam therapy in patients with rheumatoid arthritis
AU Huskisson, E. C.; Ghozlan, R.; Kurthen, R.; Degner, F. L.; Bluhmki, E.
CS St Bartholomews Hospital, London, EC1A 7BE, UK
SO British Journal of Rheumatology (1996), 35(Suppl. 1), 29-34
CODEN: BJRHDF; ISSN: 0263-7103
PB Oxford University Press
DT Journal
LA English

L8 ANSWER 167 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1996:305816 CAPLUS
DN 124:335404
TI Regulation of the arachidonic acid cascade by mouse **skin** tumor promoters
AU Fischer, S. M.; Lo, H. -H.; Li, E.; Maldve, R. E.
CS MD Anderson Cancer Center, University Texas, Smithville, TX, USA
SO Proceedings of the International Cancer Congress, Free Papers and Posters, 16th, New Delhi, Oct. 30-Nov. 5, 1994 (1994), Volume 1, 25-29. Editor(s): Rao, R. S. Publisher: Monduzzi Editore, Bologna, Italy.
CODEN: 62UYAO
DT Conference
LA English

L8 ANSWER 168 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1996:223285 CAPLUS
DN 124:285156
TI Cyclooxygenases in human and mouse **skin** and cultured human keratinocytes: association of **COX-2** expression with human keratinocyte differentiation
AU Leong, Jane; Hughes-Fulford, Millie; Rakhlin, Nina; Habib, Aida; Maclouf, Jacques; Goldyne, Marc E.
CS Veterans Affairs Med. Cent., Univ. California, San Francisco, CA, 94121, USA
SO Experimental Cell Research (1996), 224(1), 79-87
CODEN: ECREAL; ISSN: 0014-4827
PB Academic

DT Journal
LA English

L8 ANSWER 169 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1996:131356 CAPLUS
DN 124:228562
TI Role of nitric oxide and prostaglandins in lipopolysaccharide-induced increase in vascular permeability in mouse **skin**
AU Fujii, Emiko; Irie, Kaoru; Ogawa, Akira; Ohba, Ken-ichi; Muraki, Takamura
CS Department of Pharmacology, Tokyo Women's Medical College, 8-1 Kawada-cho, Shinjuku-ku, Tokyo, 162, Japan
SO European Journal of Pharmacology (1996), 297(3), 257-63
CODEN: EJPHAZ; ISSN: 0014-2999
PB Elsevier
DT Journal
LA English

L8 ANSWER 170 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1994:214522 CAPLUS
DN 120:214522
TI Inducible isoforms of cyclooxygenase and nitric-oxide synthase in inflammation
AU Vane, John R.; Mitchell, Jane A.; Appleton, Ian; Tomlinson, Annette; Bishop-Bailey, David; Croxtall, Jamie; Willoughby, Derek A.
CS William Harvey Res. Inst., St. Bartholomew's Hosp. Med. Coll., London, EC1M 6BQ, UK
SO Proceedings of the National Academy of Sciences of the United States of America (1994), 91(6), 2046-50
CODEN: PNASA6; ISSN: 0027-8424
DT Journal
LA English

=> d l8 140 all

L8 ANSWER 140 OF 170 CAPLUS COPYRIGHT 2003 ACS
AN 1999:504149 CAPLUS
DN 131:252216
TI Chemopreventive activity of celecoxib, a specific cyclooxygenase-2 inhibitor, and indomethacin against ultraviolet light-induced **skin** carcinogenesis
AU Fischer, Susan M.; Lo, Herng-Hsang; Gordon, Gary B.; Seibert, Karen; Kelloff, Gary; Lubet, Ronald A.; Conti, Claudio J.
CS Science Park-Research Division, The University of Texas M. D. Anderson Cancer Center, Smithville, TX, 78957, USA
SO Molecular Carcinogenesis (1999), 25(4), 231-240
CODEN: MOCAE8; ISSN: 0899-1987
PB Wiley-Liss, Inc.
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 8
AB Epidemiol. and dietary studies suggest that nonsteroidal anti-inflammatory drugs (NSAIDs) reduce the risk of colon cancer, possibly through a mechanism involving inhibition of cyclooxygenase (**COX**)-**2**, which is overexpressed in premalignant adenomatous polyps and colon cancer. Because UV light (UV) can induce **COX-2** and nonspecific NSAIDs can decrease UV-induced **skin** cancer, we evaluated the ability of two compds., celecoxib (a specific **COX-2** inhibitor) and indomethacin (a nonspecific NSAID), to block UV-induced **skin** tumor development in SKH:HR-1-hrBr hairless mice. Mice fed 150 or 500 ppm celecoxib showed a dose-dependent redn.

(60% and 89%, resp.) in tumor yield. Indomethacin (4 ppm) reduced tumor yield by 78%. Although both acute and chronic UV exposure increased cell proliferation and edema, neither compd. reduced these parameters. In contrast, UV-induced prostaglandin synthesis in the epidermis was effectively blocked by both compds. UV-induced increases in **COX-2** expression in **skin** were also not altered in any of the treatment groups. Similarly, tumors that constitutively express high levels of **COX-2** displayed no redn. by treatment with celecoxib or indomethacin. The dramatic protective effects of celecoxib suggests that specific **COX-2** inhibitors may offer a way to safely reduce the risk of **skin** cancer in humans.

ST COX2 celecoxib NSAID indomethacin UV **skin** carcinogenesis

IT Radioprotectants
Transformation, neoplastic
UV radiation
(**COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)

IT Prostaglandins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis: epidermal prostaglandin synthesis inhibition)

IT **Skin**
(epidermis; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis: epidermal prostaglandin synthesis inhibition)

IT **Skin**, neoplasm
Skin, neoplasm
(inhibitors; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)

IT Anti-inflammatory agents
(nonsteroidal; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)

IT Antitumor agents
Antitumor agents
(**skin**; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)

IT 39391-18-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(2; **COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)

IT 53-86-1, Indomethacin 169590-42-5, Celecoxib
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis)

IT 363-24-6, Pge2
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**COX-2** inhibitor celecoxib and NSAID indomethacin prevention of UV light-induced **skin** carcinogenesis: epidermal prostaglandin synthesis inhibition)

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(4) Boolbol, S; Cancer Res 1996, V56, P2556 CAPLUS
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=> s prostaglandin e2
         62067 PROSTAGLANDIN/BI
             1 SKIMSTOCKS/BI
L9           0 PROSTAGLANDIN SKIMSTOCKS/BI
                 ((PROSTAGLANDIN(W)SKIMSTOCKS)/BI)

=> s prostaglandin
L10      62067 PROSTAGLANDIN

=> s pge2
L11      23922 PGE2

=> s skin aging
        189684 SKIN
        147511 AGING
L12        894 SKIN AGING
                 (SKIN(W)AGING)
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=> s l11 and l12
L13          1 L11 AND L12

=> d l13

L13  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:408501  CAPLUS
DN   136:390772
TI   Cosmetic method of treating skin
IN   Blachford, Sarah Louise; Ginger, Rebecca Susan; Parmar, Preyesh; Rogers,
     Julia Sarah; Yates, Paula Rachel
PA   Unilever P.L.C., UK; Unilever N.V.; Hindustan Lever Limited
SO   PCT Int. Appl., 29 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE           APPLICATION NO.  DATE
     ---------------    ----  --------       ---------------  --------
PI   WO 2002041865      A1    20020530       WO 2001-EP13039  20011107
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
             UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2002020694      A5    20020603       AU 2002-20694    20011107
PRAI GB 2000-28355      A     20001121
     WO 2001-EP13039    W     20011107
RE.CNT  4      THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> d his

     (FILE 'HOME' ENTERED AT 16:16:23 ON 25 JUN 2003)

     FILE 'REGISTRY' ENTERED AT 16:16:34 ON 25 JUN 2003
L1            15 S CHEC
L2             5 S CEHC

     FILE 'CAPLUS' ENTERED AT 16:18:12 ON 25 JUN 2003
L3             2 S L2
L4             2 S L2
L5            41 S CEHC
L6          4989 S COX 2
               E SKIN
L7        189684 S E3
L8           170 S L7 AND L6
L9             0 S PROSTAGLANDIN E2
L10        62067 S PROSTAGLANDIN
L11        23922 S PGE2
L12          894 S SKIN AGING
L13            1 S L11 AND L12

=> s l10 and l12
L14          1 L10 AND L12
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=> s l14 not l13
L15             1 L14 NOT L13

=> d l15

L15  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:467920  CAPLUS
DN   135:60186
TI   Activators of peroxisome proliferator activated receptors .alpha..beta. in
     treatment of skin diseases with immunol. basis and graft rejection
IN   Kippenberger, Stefan; Loitsch, Stefan M.; Bernd, August
PA   Johann Wolfgang Goethe-Universitaet, Germany
SO   Ger. Offen., 8 pp.
     CODEN: GWXXBX
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.          KIND  DATE          APPLICATION NO.  DATE
     ---------------     ----  --------      ---------------  --------
PI   DE 10053003          A1   20010628      DE 2000-10053003 20001018
PRAI DE 1999-19950286     A1   19991019


=> e wrinkles
E1            2     WRINKLER/BI
E2            3     WRINKLERESISTANT/BI
E3         2006 --> WRINKLES/BI
E4            1     WRINKLEY/BI
E5         1734     WRINKLING/BI
E6            6     WRINKLINGS/BI
E7           21     WRINKLY/BI
E8            1     WRINLING/BI
E9            1     WRINN/BI
E10           1     WRINT/BI
E11           1     WRIO/BI
E12           1     WRIPPING/BI

=> s e3-e5
          2006 WRINKLES/BI
             1 WRINKLEY/BI
          1734 WRINKLING/BI
L16       3578 (WRINKLES/BI OR WRINKLEY/BI OR WRINKLING/BI)

=> d his

     (FILE 'HOME' ENTERED AT 16:16:23 ON 25 JUN 2003)

     FILE 'REGISTRY' ENTERED AT 16:16:34 ON 25 JUN 2003
L1            15 S CHEC
L2             5 S CEHC

     FILE 'CAPLUS' ENTERED AT 16:18:12 ON 25 JUN 2003
L3             2 S L2
L4             2 S L2
L5            41 S CEHC
L6          4989 S COX 2
               E SKIN
L7        189684 S E3
L8           170 S L7 AND L6
L9             0 S PROSTAGLANDIN E2
L10        62067 S PROSTAGLANDIN
L11        23922 S PGE2
```

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L12          894 S SKIN AGING
L13            1 S L11 AND L12
L14            1 S L10 AND L12
L15            1 S L14 NOT L13
                 E WRINKLES
L16         3578 S E3-E5

=> s l8 and l16
L17            1 L8 AND L16

=> d l17

L17  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:692067  CAPLUS
DN   138:61121
TI   Effect of Glycolic Acid on UVB-Induced Skin Damage and
     Inflammation in Guinea Pigs
AU   Park, K. S.; Kim, H. J.; Kim, E. J.; Nam, K. T.; Oh, J. H.; Song, C. W.;
     Jung, H. K.; Kim, D. J.; Yun, Y. W.; Kim, H. S.; Chung, S. Y.; Cho, D. H.;
     Kim, B. Y.; Hong, J. T.
CS   National Institute of Toxicological Research, Department of General
     Toxicology, Korea Food and Drug Administration, Seoul, 361-763, S. Korea
SO   Skin Pharmacology and Applied Skin Physiology (2002), 15(4), 236-245
     CODEN: SPAPFF; ISSN: 1422-2868
PB   S. Karger AG
DT   Journal
LA   English
RE.CNT  23    THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> d l10 and l15
L15 IS NOT VALID HERE
For an explanation, enter "HELP DISPLAY".

=> s l10 and l16
L18            6 L10 AND L16

=> d l18 1-6

L18  ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:692067  CAPLUS
DN   138:61121
TI   Effect of Glycolic Acid on UVB-Induced Skin Damage and Inflammation in
     Guinea Pigs
AU   Park, K. S.; Kim, H. J.; Kim, E. J.; Nam, K. T.; Oh, J. H.; Song, C. W.;
     Jung, H. K.; Kim, D. J.; Yun, Y. W.; Kim, H. S.; Chung, S. Y.; Cho, D. H.;
     Kim, B. Y.; Hong, J. T.
CS   National Institute of Toxicological Research, Department of General
     Toxicology, Korea Food and Drug Administration, Seoul, 361-763, S. Korea
SO   Skin Pharmacology and Applied Skin Physiology (2002), 15(4), 236-245
     CODEN: SPAPFF; ISSN: 1422-2868
PB   S. Karger AG
DT   Journal
LA   English
RE.CNT  23    THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18  ANSWER 2 OF 6  CAPLUS  COPYRIGHT 2003 ACS
AN   2000:592520  CAPLUS
DN   133:182713
TI   Method and composition for promoting hair growth
```

IN Jones, Marcus R.
PA USA
SO PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000048559	A2	20000824	WO 2000-US3973	20000217
WO 2000048559	A3	20001207		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-252780 A1 19990219

L18 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2003 ACS
AN 1996:202114 CAPLUS
DN 124:311654
TI Effect of cool preservation on pulmonary arterial smooth muscle cells
AU Hall, Susan M.; Haworth, Sheila G.
CS Developmental Vascular Biology, Institute Child Health, London, WC1N 1EH, UK
SO American Journal of Physiology (1996), 270(3, Pt. 1), L435-L445
CODEN: AJPHAP; ISSN: 0002-9513
PB American Physiological Society
DT Journal
LA English

L18 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2003 ACS
AN 1992:484103 CAPLUS
DN 117:84103
TI Eicosanoid-mediated contractility of hepatic stellate cells
AU Kawada, Norifumi; Klein, Heike; Decker, Karl
CS Biochem. Inst., Univ. Freiburg, Freiburg/Br., D-7800, Germany
SO Biochemical Journal (1992), 285(2), 367-71
CODEN: BIJOAK; ISSN: 0306-3275
DT Journal
LA English

L18 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2003 ACS
AN 1987:433809 CAPLUS
DN 107:33809
TI Dopamine attenuates the contractile response to angiotensin II in isolated rat glomeruli and cultured mesangial cells
AU Barnett, R.; Singhal, P. C.; Scharschmidt, L. A.; Schlondorff, D.
CS Albert Einstein Coll. Med., Bronx, NY, USA
SO Circulation Research (1986), 59(5), 529-33
CODEN: CIRUAL; ISSN: 0009-7330
DT Journal
LA English

L18 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2003 ACS
AN 1986:419354 CAPLUS
DN 105:19354
TI Effects of leukotrienes on isolated rat glomeruli and cultured mesangial

cells
AU Barnett, Richard; Goldwasser, Philip; Scharschmidt, Linda A.; Schlondorff, Detlef
CS Dep. Med., Albert Einstein Coll. Med., Bronx, NY, 10461, USA
SO American Journal of Physiology (1986), 250(5, Pt. 2), F838-F844
CODEN: AJPHAP; ISSN: 0002-9513
DT Journal
LA English

=> s l6 and l16
L19 1 L6 AND L16

=> d l19

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS
AN 2002:692067 CAPLUS
DN 138:61121
TI Effect of Glycolic Acid on UVB-Induced Skin Damage and Inflammation in Guinea Pigs
AU Park, K. S.; Kim, H. J.; Kim, E. J.; Nam, K. T.; Oh, J. H.; Song, C. W.; Jung, H. K.; Kim, D. J.; Yun, Y. W.; Kim, H. S.; Chung, S. Y.; Cho, D. H.; Kim, B. Y.; Hong, J. T.
CS National Institute of Toxicological Research, Department of General Toxicology, Korea Food and Drug Administration, Seoul, 361-763, S. Korea
SO Skin Pharmacology and Applied Skin Physiology (2002), 15(4), 236-245
CODEN: SPAPFF; ISSN: 1422-2868
PB S. Karger AG
DT Journal
LA English
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s cyclooxygenase
L20 17646 CYCLOOXYGENASE

=> s s l20 and l16
MISSING OPERATOR S L20
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l20 and l16
L21 3 L20 AND L16

=> d l21 1-3

L21 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 2002:692067 CAPLUS
DN 138:61121
TI Effect of Glycolic Acid on UVB-Induced Skin Damage and Inflammation in Guinea Pigs
AU Park, K. S.; Kim, H. J.; Kim, E. J.; Nam, K. T.; Oh, J. H.; Song, C. W.; Jung, H. K.; Kim, D. J.; Yun, Y. W.; Kim, H. S.; Chung, S. Y.; Cho, D. H.; Kim, B. Y.; Hong, J. T.
CS National Institute of Toxicological Research, Department of General Toxicology, Korea Food and Drug Administration, Seoul, 361-763, S. Korea
SO Skin Pharmacology and Applied Skin Physiology (2002), 15(4), 236-245
CODEN: SPAPFF; ISSN: 1422-2868
PB S. Karger AG
DT Journal
LA English

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 2002:502829 CAPLUS
DN 137:68172
TI Pharmaceutical formulations of resveratrol for treatment of skin disorders
IN Pezzuto, John M.; Moon, Richard C.; Jang, Mei-Shiang; Ouali, Aomar; Lin, Shengzhao; Barillas, Karla Slowing
PA Pharmascience, Can.
SO U.S., 15 pp., Cont.-in-part of U.S. 6,008,260.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6414037	B1	20020702	US 1999-430337	19991029
	US 6008260	A	19991228	US 1998-5114	19980109
	WO 2001030336	A2	20010503	WO 2000-US41488	20001023
	WO 2001030336	A3	20011227		
	WO 2001030336	C2	20021227		
	W: CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1239849	A2	20020918	EP 2000-991709	20001023
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	US 2002173472	A1	20021121	US 2002-71124	20020207
PRAI	US 1998-5114	A2	19980109		
	AU 1998-88420	A	19981009		
	US 1999-430337	A1	19991029		
	WO 2000-US41488	W	20001023		

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 2001:870069 CAPLUS
DN 136:130852
TI Rays and arrays: the transcriptional program in the response of human epidermal keratinocytes to UVB illumination
AU Li, Deling; Turit, Thomas G.; Schuck, Alyssa; Freedberg, Irwin M.; Khitrov, Gregory; Blumenberg, Miroslav
CS The R. O. Perelman Department of Dermatology, New York University School of Medicine, New York, NY, USA
SO FASEB Journal (2001), 15(13), 2533-2535, 10.1096/fj.01-0172fje
CODEN: FAJOEC; ISSN: 0892-6638
PB Federation of American Societies for Experimental Biology
DT Journal
LA English
RE.CNT 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d l21 2 3 all

L21 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 2002:502829 CAPLUS
DN 137:68172
TI Pharmaceutical formulations of resveratrol for treatment of skin disorders
IN Pezzuto, John M.; Moon, Richard C.; Jang, Mei-Shiang; Ouali, Aomar; Lin, Shengzhao; Barillas, Karla Slowing

PA Pharmascience, Can.
SO U.S., 15 pp., Cont.-in-part of U.S. 6,008,260.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K031-05
NCL 514733000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6414037	B1	20020702	US 1999-430337	19991029
	US 6008260	A	19991228	US 1998-5114	19980109
	WO 2001030336	A2	20010503	WO 2000-US41488	20001023
	WO 2001030336	A3	20011227		
	WO 2001030336	C2	20021227		
	W: CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1239849	A2	20020918	EP 2000-991709	20001023
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	US 2002173472	A1	20021121	US 2002-71124	20020207
PRAI	US 1998-5114	A2	19980109		
	AU 1998-88420	A	19981009		
	US 1999-430337	A1	19991029		
	WO 2000-US41488	W	20001023		

AB A method is provided for preventing or treating skin conditions, disorders or diseases, such as may be assocd. with or caused by inflammation, sun damage or natural aging. The method involves administration, preferably topical administration, of an active agent selected from the group consisting of resveratrol, pharmacol. acceptable salts, esters, amides, prodrugs and analogs thereof, and combinations of any of the foregoing. Pharmaceutical formulations for use in conjunction with the aforementioned method, such as ointments, creams, lotions, and emulsions are provided as well. For example, a topical resveratrol compn. in the form of cream was prepd. contg. (by Wt.) polyethylene glycol and ethylene glycol palmitostearate 5%, caprilic/capric triglycerides 5%, oleoyl macrogol glycerides (Labrafil M 1944CS) 4%, cetyl alc. 5.5%, PPG-2 myristyl ether propionate (Crodamol PMP) 6%, xanthan gum 0.3%, water 48%, propylene glycol 1%, methylparaben 0.18%, propylparaben 0.02%, trans-resveratrol 10%, and diethylene glycol monoethyl ether (Transcutol) 15%. An off-white, stable cream was obtained. The cream inhibited wrinkle formation in hairless mice.

ST topical resveratrol antiinflammatory antitumor skin

IT Keratosis
(actinic; topical resveratrol formulations for treatment of skin disorders)

IT Skin, disease
(aging, **wrinkles**; topical resveratrol formulations for treatment of skin disorders)

IT Dermatitis
(atopic; topical resveratrol formulations for treatment of skin disorders)

IT Mammary gland, neoplasm
(chemoprevention of; topical resveratrol formulations for treatment of skin disorders)

IT Dermatitis
(contact; topical resveratrol formulations for treatment of skin disorders)

IT Lupus erythematosus

(discoid; topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(emulsions; topical resveratrol formulations for treatment of skin disorders)
IT Skin, disease
(epidermolysis bullosa; topical resveratrol formulations for treatment of skin disorders)
IT Erythema
(erythema nodosum; topical resveratrol formulations for treatment of skin disorders)
IT Dermatitis
(exfoliative; topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(gels; topical resveratrol formulations for treatment of skin disorders)
IT Radicals, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibition of formation of; topical resveratrol formulations for treatment of skin disorders)
IT Skin, neoplasm
(inhibitors; topical resveratrol formulations for treatment of skin disorders)
IT Skin
(keratinization; topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(lotions; topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(microemulsions; topical resveratrol formulations for treatment of skin disorders)
IT Erythema
(multiforme; topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(ointments, creams; topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(ointments; topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(oral; resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(parenterals; resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(prodrugs; topical resveratrol formulations for treatment of skin disorders)
IT Antitumor agents
(promotion inhibitors; topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(solns.; topical resveratrol formulations for treatment of skin disorders)
IT Anti-inflammatory agents
Dermatomyositis
Mutation inhibitors
Psoriasis
Seborrhea
Skin, disease
Skin preparations (pharmaceutical)

Sunburn
(topical resveratrol formulations for treatment of skin disorders)
IT Drug delivery systems
(topical; topical resveratrol formulations for treatment of skin disorders)
IT 9032-20-6, Quinone reductase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(induction of; topical resveratrol formulations for treatment of skin disorders)
IT 329900-75-6, **Cyclooxygenase** 2 329967-85-3, **Cyclooxygenase** 1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibition of; topical resveratrol formulations for treatment of skin disorders)
IT 501-36-0, Resveratrol 501-36-0D, trans-Resveratrol, analogs and derivs. 27208-80-6 61434-67-1, cis-Resveratrol 61434-67-1D, cis-Resveratrol, conjugates with saccharides 148766-36-3
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical resveratrol formulations for treatment of skin disorders)
RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Anon; JP 61060609 1986 CAPLUS
(2) Anon; JP 409328410 A 1997
(3) Anon; JP 10045566 1998 CAPLUS
(4) Anon; WO 9904747 1999 CAPLUS
(5) Bertram; Cancer Lett 1979, V7, P289 CAPLUS
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(8) Gerhauser; Nature Med 1995, V1(3), P260 MEDLINE
(9) Goodwin; Am J Med 1984, V77, P7 CAPLUS
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(12) Jang; Science 1997, V275(5297), P218 CAPLUS
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(15) Kulmacz; Prostaglandins and Related Substances 1987, P209
(16) Landolph; Transformation Assay of Established Cell Lines 1985, P185 CAPLUS
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(18) Miura; Igaku no Ayumi 1997, V183(8), P530 CAPLUS
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(21) Pezzuto; US 6008260 A 1999 CAPLUS
(22) Plescia; Proc Nat Acad Sci, USA 1975, V72(5), P1848 CAPLUS
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(29) Sporn; Federation Proceedings 1979, V38(11), P2528 CAPLUS
(30) Subbaramaiah; Pharmaceutical Biology 1998, V36, P35 CAPLUS
(31) Suh; Anticancer Res 1995, V15, P233 CAPLUS
(32) van der Ouderaa; Methods Enzymol 1982, V86, P60 CAPLUS
(33) Wattenberg; Cancer Research 1993, V53, P5890 MEDLINE
(34) Wild; Carcinogenesis 1987, V8(4), P541 CAPLUS
(35) Zenser; J Pharmacol Exp Ther 1983, V227(3), P545 CAPLUS
(36) Zhang; Proc Natl Acad Sci, USA 1994, V91, P3147 CAPLUS

L21 ANSWER 3 OF 3 CAPLUS
AN 2001:870069 CAPLUS
DN 136:130852

TI Rays and arrays: the transcriptional program in the response of human epidermal keratinocytes to UVB illumination

AU Li, Deling; Turit, Thomas G.; Schuck, Alyssa; Freedberg, Irwin M.; Khitrov, Gregory; Blumenberg, Miroslav

CS The R. O. Perelman Department of Dermatology, New York University School of Medicine, New York, NY, USA

SO FASEB Journal (2001), 15(13), 2533-2535, 10.1096/fj.01-0172fje
CODEN: FAJOEC; ISSN: 0892-6638

PB Federation of American Societies for Experimental Biology

DT Journal

LA English

CC 8-7 (Radiation Biochemistry)

AB The epidermis, our first line of defense from UV light, bears the majority of photodamage, which results in skin thinning, **wrinkling**, keratosis, and malignancy. Hypothesizing that skin has specific mechanisms to protect itself and the organism from UV damage, we used DNA arrays to follow UV-caused gene expression changes in epidermal keratinocytes. Of the 6,800 genes examd., UV regulates the expression of at least 198. Three waves of changes in gene expression can be distinguished, 0.5-2, 4-8, and 16-24 h after illumination. The first contains transcription factors, signal transducing, and cytoskeletal proteins that change cell phenotype from a normal, fast-growing cell to an activated, paused cell. The second contains secreted growth factors, cytokines, and chemokines; keratinocytes, having changed their own physiol., alert the surrounding tissues to the UV damage. The third wave contains components of the cornified envelope, as keratinocytes enhance the epidermal protective covering and, simultaneously, terminally differentiate and die, removing a carcinogenic threat. UV also induces the expression of mitochondrial proteins that provide addnl. energy, and the enzymes that synthesize raw materials for DNA repair. Using a novel skin organ culture model, we demonstrated that the UV-induced changes detected in keratinocyte cultures also occur in human epidermis in vivo.

ST UVB radiation regulated gene skin keratinocyte

IT Macrophage inflammatory protein 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(MIP-2.alpha.; transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)

IT Cell membrane
Cytoskeleton
DNA repair
Post-transcriptional processing
Signal transduction, biological
(UVB-regulated genes in human epidermal keratinocytes)

IT Chemokines
Cytokines
Elastins
Gene, animal
Growth factors, animal
Interleukin 8
Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(UVB-regulated genes in human epidermal keratinocytes)

IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-myc; transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)

IT Cell envelope
(cornified; UVB-regulated genes in human epidermal keratinocytes)

IT Antioxidants
(defense proteins; UVB-regulated genes in human epidermal keratinocytes)

IT Cell junction

(desmosome; UVB-regulated genes in human epidermal keratinocytes)
IT Metabolism
(energy; UVB-regulated genes in human epidermal keratinocytes)
IT Skin
(epidermis; transcriptional program in response of human epidermal keratinocytes to UVB illumination)
IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes regulated by; UVB-regulated genes in human epidermal keratinocytes)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(involucrins; transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
IT Skin
(keratinocyte; transcriptional program in response of human epidermal keratinocytes to UVB illumination)
IT Chemokines
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(melanoma growth-stimulating activity-.beta.; transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
IT Skin, disease
(photoaging; transcriptional program in response of human epidermal keratinocytes to UVB illumination)
IT Post-translational processing
(proteolytic; UVB-regulated genes in human epidermal keratinocytes)
IT DNA microarray technology
Human
UV B radiation
(transcriptional program in response of human epidermal keratinocytes to UVB illumination)
IT mRNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
IT Caseins, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.beta.-; UVB-regulated genes in human epidermal keratinocytes)
IT 329900-75-6, **Cyclooxygenase** 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(transcriptional program in response of human epidermal keratinocytes to UVB illumination: changes in protein and mRNA)
RE.CNT 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L7        189684 S E3
L8           170 S L7 AND L6
L9             0 S PROSTAGLANDIN E2
L10        62067 S PROSTAGLANDIN
L11        23922 S PGE2
L12          894 S SKIN AGING
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L19            1 S L6 AND L16
L20        17646 S CYCLOOXYGENASE
L21            3 S L20 AND L16

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L22            2 L20 AND L12

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L22  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:800060  CAPLUS
DN   136:66317
TI   UV erythema reducing capacity of mizolastine compared to acetyl-salicylic
     acid or both combined in comparison to indomethacin
AU   Grundmann, Jens-Uwe; Bockelmann, Raik; Bonnekoh, Bernd; Gollnick, Harald
     P. M.
CS   Department of Dermatology and Venereology, Otto-von-Guericke-University,
     Magdeburg, D-39120, Germany
SO   Photochemistry and Photobiology (2001), 74(4), 587-592
     CODEN: PHCBAP; ISSN: 0031-8655
PB   American Society for Photobiology
DT   Journal
LA   English
RE.CNT  43    THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22  ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2003 ACS
AN   2001:780665  CAPLUS
DN   135:313633
TI   Treatment of hyperproliferative, inflammatory and related mucocutaneous
     disorders using inhibitors of mevalonate synthesis and metabolism
IN   Parks, Thomas P.; Grayson, Stephen
PA   Cellegy Pharmaceuticals, Inc., USA
SO   PCT Int. Appl., 50 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
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PI   WO 2001078706      A2    20011025      WO 2001-US12175  20010412
     WO 2001078706      A3    20020328
     WO 2001078706      C2    20021227
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              HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
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YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
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BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002010128 A1 20020124 US 2001-833384 20010411
PRAI US 2000-197357P P 20000413

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L22 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2001:800060 CAPLUS
DN 136:66317
TI UV erythema reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined in comparison to indomethacin
AU Grundmann, Jens-Uwe; Bockelmann, Raik; Bonnekoh, Bernd; Gollnick, Harald P. M.
CS Department of Dermatology and Venereology, Otto-von-Guericke-University, Magdeburg, D-39120, Germany
SO Photochemistry and Photobiology (2001), 74(4), 587-592
CODEN: PHCBAP; ISSN: 0031-8655
PB American Society for Photobiology
DT Journal
LA English
CC 8-9 (Radiation Biochemistry)
Section cross-reference(s): 1
AB UV light exerts hazardous effects such as induction of skin cancer and premature **skin aging**. In this study we evaluated an assumptive anti-inflammatory effect of the nonsedative histamine H1-receptor antagonist, mizolastine, on UV-induced acute sunburn reaction. Therefore, a clin., randomized, double-blind, four-arm, crossover study was conducted in healthy young female volunteers (skin type II) comparing the UV sensitivity under mizolastine, acetyl-salicylic acid (ASA), indomethacin or a mizolastine/ASA combination. Moreover, HaCaT keratinocytes were incubated with mizolastine under various UV treatment modalities in vitro to study its effect on the release of inflammatory cytokines, i.e. interleukin (IL)-1.alpha., IL-6 and tumor necrosis factor .alpha. (TNF-.alpha.). All three drugs were effective in suppressing the UVB-, UVA- and combined UVA/UVB-erythema. However, the strongest effects were obsd. using the combined treatment with both 250 mg ASA and 10 mg mizolastine. An inhibitory effect in vitro of 10 nM mizolastine upon UV-induced cytokine release from HaCaT keratinocytes was obsd. for IL-1.alpha. at 24 h after 10 J/cm2 UVA1, for IL-6 at 48 h after 10 J/cm2 UVA1 and 30 mJ/cm2 UVB, and also for TNF-.alpha. at 4 h after 10 J/cm2 UVA, 10 J/cm2 UVA1 and 30 mJ/cm2 UVB, resp. The combination of mizolastine and ASA can be strongly recommended as a protective measure against UV erythema development with a lower unwanted side effect profile than that of the hitherto treatment modality, i.e. indomethacin.
ST UV erythema protection antiinflammatory mizolastine acetylsalicylic acid cytokine
IT Anti-inflammatory agents
Drug interactions
Erythema
Human
Radioprotectants
Sunburn
UV A radiation
UV radiation
(UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)

IT Interleukin 1.alpha.
Interleukin 6
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT Skin, disease
(aging, prevention; UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT Cytokines
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inflammatory; UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT Skin
(keratinocyte; UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT 50-78-2, Acetyl-salicylic acid 108612-45-9, Mizolastine
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
IT 39391-18-9, **Cyclooxygenase**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; UV erythema-reducing capacity of mizolastine compared to acetyl-salicylic acid or both combined vs. indomethacin)
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L22 ANSWER 2 OF 2 CAPLUS
AN 2001:780665 CAPLUS
DN 135:313633
TI Treatment of hyperproliferative, inflammatory and related mucocutaneous disorders using inhibitors of mevalonate synthesis and metabolism
IN Parks, Thomas P.; Grayson, Stephen
PA Cellegy Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-00
ICS A61K031-366; A61K031-404; A61K031-22; A61K031-40; A61K031-575; A61K031-015; A61K031-196; A61K031-216; A61K045-06; A61P017-00; A61P029-00
CC 1-12 (Pharmacology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001078706	A2	20011025	WO 2001-US12175	20010412
	WO 2001078706	A3	20020328		
	WO 2001078706	C2	20021227		

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	US 2002010128	A1	20020124	US 2001-833384	20010411
PRAI	US 2000-197357P	P	20000413		

AB The invention provides methods for treating a variety of hyperproliferative and inflammatory mucocutaneous disorders, including basal cell carcinoma, squamous cell carcinoma, psoriasis and atopic dermatitis, as well as skin irritation and disorders assocd. with **skin aging** and skin photodamage using inhibitors of cholesterol metab. The invention further relates to the discovery that the combined use of several inhibitors of cholesterol metab. produces synergistic effects. Furthermore, the invention is directed to the use of inhibitors of cholesterol metab. as excipients to enhance the effects of antiinflammatory drugs.
ST mevalonate metab inhibitor antiproliferative antiinflammatory; cholesterol metab inhibitor antiproliferative antiinflammatory; mucocutaneous disorder mevalonate metab inhibitor; basal cell carcinoma mevalonate metab inhibitor; squamous cell carcinoma mevalonate metab inhibitor; psoriasis atopic dermatitis mevalonate metab inhibitor; skin irritation aging mevalonate metab inhibitor; photodamage skin mevalonate metab inhibitor
IT Cell proliferation
(T cell; mevalonate synthesis and metab. inhibitors for treatment of

hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Skin, disease
(aging; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Peptides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(analogs; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Dermatitis
(atopic; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Dermatitis
(contact; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Skin, disease
(hyperproliferation; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Skin, disease
(irritation; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Anti-inflammatory agents
Dermatitis
Drug delivery systems
Drug interactions
Psoriasis
Skin, disease
(mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Corticosteroids, biological studies
Lanolin
Monoterpenes
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Drugs
Permeation enhancers
(mucocutaneous inflammation and irritation from; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Sterols
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oxysterols; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Skin, disease
(photoaging; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Skin, disease
(photodermatosis; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)
IT Proliferation inhibition
(proliferation inhibitors; mevalonate synthesis and metab. inhibitors

for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT T cell (lymphocyte)
(proliferation; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT Prenylation
(protein prenylation inhibitor; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT Drug interactions
(synergistic; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT Drug delivery systems
(topical; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT Drug delivery systems
(transdermal, mucocutaneous inflammation and irritation from; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT 9028-35-7, HMG-CoA reductase 329900-75-6, **Cyclooxygenase** 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT 150-97-0, Mevalonic acid
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT 57-88-5, Cholesterol, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT 53-86-1, Indomethacin 56-81-5, Glycerol, biological studies 64-86-8, Colchicine 69-72-7D, Salicylic acid, salicylates, biological studies 79-09-4, Propionic acid, biological studies 123-30-8, p-Aminophenol 536-59-4, Perillyl alcohol 566-27-8, 7.beta.-Hydroxycholesterol 2140-46-7, 25-Hydroxycholesterol 5989-27-5 7694-45-3, Perillic acid 22071-15-4, Ketoprofen 36322-90-4, Piroxicam 73573-88-3, Mevastatin 74103-06-3, Ketorolac 75330-75-5, Lovastatin 79902-63-9, Simvastatin 81093-37-0, Pravastatin 93957-54-1, Fluvastatin 132100-55-1, Dalvastatin 134523-00-5, Atorvastatin 145599-86-6, Cerivastatin 170006-72-1, FTI-276 171744-11-9, GGTI-286
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

IT 135371-29-8
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(mevalonate synthesis and metab. inhibitors for treatment of hyperproliferative, inflammatory and related mucocutaneous disorders)

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L2             5 S CEHC

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                E SKIN
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L8           170 S L7 AND L6
L9             0 S PROSTAGLANDIN E2
L10        62067 S PROSTAGLANDIN
L11        23922 S PGE2
L12          894 S SKIN AGING
L13            1 S L11 AND L12
L14            1 S L10 AND L12
L15            1 S L14 NOT L13
                E WRINKLES
L16         3578 S E3-E5
L17            1 S L8 AND L16
L18            6 S L10 AND L16
L19            1 S L6 AND L16
L20        17646 S CYCLOOXYGENASE
L21            3 S L20 AND L16
L22            2 S L20 AND L12

=>

---Logging off of STN---


=>
Executing the logoff script...


=> LOG Y

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   153.37     168.26

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -8.46      -8.46

STN INTERNATIONAL LOGOFF AT 16:51:37 ON 25 JUN 2003
```